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Tros Tyriusque mihi nullo discrimine agetur.

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NORTH AMERICAN REVIEW.

No. CCXLVIII.

J U L Y , 1 8 7 5 .

ART. I.—SOME LATE EFFORTS AT CONSTITUTIONAL REFORM.

SINCE 1870, when Illinois adopted a new Constitution of a most peculiar character, as will be seen hereafter, there has arisen in a number of States a strong movement in the direction of political purification attempted to be worked out through the means of constitutional amendment,—a movement partly successful and partly abortive. It has apparently come to a definite pause, so that we can measure its spent force and describe the field over which it has passed. It was the result of a decided but undemonstrative feeling of general disgust with the shameless corruption in State capitols, and the new constitutional provisions were expressly designed either to purify the Legislature, or, if that could not be done, to forbid all legislation not imperatively necessary. Besides this, it may be said that numberless fancied ills of the Commonwealth were treated each with its supposed appropriate specific. The movement began in the West, and almost to the end of its course retained the characteristics of its origin, in its honest, blundering, narrow theories, in its heavy and clumsy blows at impudent wrong, and in its spasmodic wrath, which, having raged a certain length of time, gradually cooled again into the indifference out of which it had been for the while roused.

The first State in line was Illinois, then Pennsylvania, then Ohio, and finally Michigan and New York. In some respects

the standard of intelligence grew higher at each step, till we have in the new Constitution of New York an excellent and effective reform. The proposed constitutions of Michigan and Ohio were rejected by the popular vote, and many of their provisions, though new when introduced into Illinois, Pennsylvania, and New York, were, so far as respects Michigan and Ohio themselves, the old law, little or not at all altered. Now this work, though probably not generally known and though it has not succeeded in interesting many persons except those immediately concerned, is, as this paper is intended to show, of very great significance. To begin with, as there is no smooth road through the details of the subject, and as they must in one way or another be mastered, our first object will be to analyze these "organic laws." Perhaps the easiest way of doing this is to catalogue the evils at which the new constitutions were directed, and under each evil give the respective remedies. The following are all the more important of the former :—

FALSE ELECTION RETURNS.

ABUSE OF THE PARDONING POWER.

DELAY OF JUSTICE OWING TO THE PRESSURE OF BUSINESS IN COURTS OF FINAL JURISDICTION.

SPECIAL LEGISLATION IN GENERAL. — Special legislation as a source of corruption at the hands of private persons and of corporations. Special legislation as interfering with municipalities. Special legislation as being unequal.

BRIBERY OF LEGISLATORS.

THE TRICKS BY WHICH IMPROPER LEGISLATION IS OBTAINED, such as, by passing bills when only a quorum of persons interested is present ; by passing a bill through its different readings with intentional haste, so as to avoid attention ; by crowding the bills at one time, as at the end of a session, so as to force through certain measures unobserved ; by changing the existing law by an amendment so that an intention to make a substantial alteration of the original law is not noticeable ; by amending a bill on its passage so as to change its purport without the fraud being perceived ; by revising, repealing, etc., a statute by reference merely to its title, the effect of the action not being comprehensible without a particular knowledge of the law thus revised ; by passing laws under false or misleading titles ; by passing laws containing a number of provisions in which an improper

enactment, called a "snake in the grass," is concealed ; by passing what is equivalent to a bill in the shape of a joint-resolution, thus evading the governor's veto ; by tacking an indefensible appropriation to a general appropriation bill and getting it passed, because the governor could not veto part without vetoing all ; in making appropriations in a private law.

LEGISLATION IMPROPER AND OFTEN PROCURED BY CORRUPTION in the way of voting extra compensation to persons who had contracted with the State, and who alleged themselves to be losers unexpectedly, thus leading contractors to bid low to secure the contract, with the purpose of repairing any loss by additional pay after the work had proceeded so far as to make it impossible to go back ; releasing corporations and individuals from liability which had accrued from them to the State ; making the bonds and stock of private corporations legal investments for trustees, etc. ; limiting the compensation to be recovered for injuries done to persons or property by a corporation.

INEQUALITY OF TAXATION.

EXTRAVAGANCE IN INCREASING THE DEBT OF THE STATE AND IN LENDING THE STATE'S CREDIT OR MONEY TO PRIVATE UNDERTAKINGS, OR IN ENGAGING IN INTERNAL IMPROVEMENTS. THE SAME EVILS IN MUNICIPALITIES.

THE APPROPRIATION OF STATE AID TO SECTARIAN OBJECTS, OR IN EXEMPTING THESE LATTER FROM TAXATION.

SINECURE OFFICES, such as inspectorships of merchandise, etc.

THE SYSTEM OF PAYING DEPARTMENT OFFICERS, PROTHONOTARIES, RECORDERES, ETC., BY FEES, thus leading to greatly undue compensation to the official and to extortion upon the public.

EVILS IN PRIVATE CORPORATIONS, as the usurpation by officers, directors, etc., of inordinate authority over the corporate affairs ; the undertaking by corporations of enterprises outside of their legitimate functions ; the dishonest way in which their officers can arrange to manage corporations in their, the officers' own interest ; the watering of railroad stock ; the trade in charters ; the immunity of corporations under their charters held irrevocable by the Dartmouth College case ; the combination of private corporations so as to put an end to competition and obtain a monopoly ; inordinate charges by corporations, especially transportation companies.

These are all or nearly all the evils which the constitutions we are now considering find to exist in the State ; and the remedies which have been applied to them are given in the

following summary, which the general reader may think it enough merely to glance at. It is put in finer print, in order to distinguish it from the rest of this paper, and its clauses are numbered for the purpose of reference.

Some of the provisions hereinafter given are not new, but were part of the previous constitutions ; especially was this the case in Michigan and Ohio. In Illinois, Pennsylvania, and New York they were, however, either entirely new or so changed as to be substantially so. To follow in detail all the changes which resulted from the movement, which is the subject before us, would be impossible ; and the statement now to be given, though rough, is, it is believed, a complete and true account of the recent constitutional amendments.

I. *Corruption in elections and false election returns* are sought to be remedied in Pennsylvania by providing that ballots shall be numbered when cast and the voter told his number. That the voter may write his name upon his ballot if he so wishes. Election officers sworn not to tell how citizens vote. That under no registry law shall a voter be disfranchised because not registered. That bribing or being bribed shall be a cause for challenge, and that the person challenged shall before voting be required to deny under oath the accusation. That bribery by a candidate shall be punished by perpetual disqualification for office. That violation of the election laws shall, in addition to other penalties, be punished by deprivation of suffrage for four years. That the Court of Common Pleas of each county may appoint inspectors of elections to be of different political parties, all the law judges to concur in their appointment, and the inspectors to have the ultimate decision when the members of the election boards differ.

To the same general end, as well as to secure equality of representation, in the Constitution of Illinois and the proposed Constitution of Ohio, the "cumulative" or "free vote" was introduced as to the elections of members of the Legislature.

II. *Abuse in the exercise of the pardoning power* is sought in Pennsylvania to be remedied by providing, that no pardon or commutation of sentence shall be granted except upon the written recommendation of the Lieutenant-Governor, Secretary of the Commonwealth, Attorney-General, and Secretary of Internal Affairs, after full hearing upon public notice in open session, the recommendation, with the reasons therefor, to be recorded and filed in the office of the Secretary of the Commonwealth.

III. *The accumulation of cases in the Supreme Courts* of the larger States has been sought, in Ohio, to be remedied by providing for the existence of a Circuit Court, under the Supreme Court, which should have as much appellative jurisdiction as the Legislature might think fit to give.

IV. It has been attempted in Illinois to remedy the *evils of special legislation* by prohibiting special legislation in some twenty different cases, the principal of which are, granting any exclusive privileges to individuals or corporations; granting right to lay down railroad tracks; incorporating towns or changing their charters; regulating township or county affairs; regulating courts of justices; regulating elections; opening or vacating roads; granting divorces; changing names of persons or places; granting exemption from taxation, etc., etc.

In Pennsylvania, by prohibiting any special or local legislation in about forty cases, including those enumerated in the Illinois Constitution, and adding a number of much the same general nature; by providing that no special bill shall be passed without public notice and advertisement, which notice must be exhibited in the General Assembly.

In Ohio, by providing that all general laws shall be uniform; by prohibiting privileges being given by a special law to municipalities or private corporations; and by providing that the Legislature shall make laws organizing and classifying municipalities, the number of classes not to exceed six, and that as to any class the laws should be general and uniform.

In Michigan, by prohibiting special legislation in some nineteen cases, the most important of which correspond with those mentioned in the constitutions of Illinois and Pennsylvania; and by requiring a two-thirds vote before public money can be appropriated to local or private purposes.

In New York, by prohibiting special legislation in some seventeen cases, the most important of which correspond with those already given; by providing that a three-quarters vote shall be necessary to the introduction of any special bill after the first sixty days of the session; by providing that public notice shall always be made of the intention to apply for such a bill, the mode of giving such notice to be prescribed by the Legislature; by providing that no special law shall embrace more than one subject, and that no general law shall embrace any provision of a private character.

V. *The harm in general which a Legislature can do* is sought, in Illinois and Pennsylvania, to be remedied by providing that the sessions of that body shall be only biennial.

VI. It has been attempted in Illinois to put an end to *legislative bribery* by requiring an oath from each legislator that he has used no bribery in obtaining his election, etc., and will not be bribed to vote for any bill, etc.

In Pennsylvania, by an oath of the same nature, only more elaborate ; and by providing that any legislator who shall accept a bribe or promise of personal advantage, etc., etc., shall be deemed guilty of bribery and incur the penalties therefor, i. e. perpetual disqualification for office, etc., etc. ; by providing that offering promises of advantage, etc., etc., shall be considered bribery ; by providing that corrupt solicitation of members of the General Assembly shall be defined and punished by law ; and by providing that witnesses in bribery cases shall not be allowed the privilege of silence on the ground of any liability to criminal prosecution which might be incurred by their testifying, but that such testimony shall not in any way be used against them.

In New York, by requiring an oath from legislators (and all other officials) that they did not directly or indirectly use bribery in their election ; by providing that any official who shall accept any bribe or advantage, etc., etc., to affect his official action, shall be guilty of felony, as also any person offering a bribe, promise, etc. ; by providing, in regard to the privilege of not testifying, substantially the same as in Pennsylvania ; by providing that the expenses of all bribery investigations shall be a charge upon the State, and that any district attorney failing faithfully to prosecute shall be removed from office.

VII. *The tricks by which improper legislation is usually obtained* are sought in Illinois to be remedied by providing that every bill shall be read at large on three different days ; that no act shall embrace more than one subject, to be expressed in its title ; and that every bill and its amendments shall be printed before its final passage.

In Pennsylvania, by providing that every bill shall be read at large on three different days ; that every bill shall be referred to a committee, and when returned, be printed ; that no bill, except general appropriation bills, shall be passed containing more than one subject expressed in its title ; that all amendments be printed ; that a vote of the majority of the entire Legislature be necessary to the passage of every bill ; that upon the final vote the ayes and noes be taken and recorded ; that no law be revived, repealed, or amended, etc., by reference merely to its title, but that the original law and the alteration be set out at length ; that the presiding officer of each house shall sign every bill in the presence of the house after the title has

been read, and that the fact of the signing shall be entered upon the journal ; and that no bill shall be amended on its passage so as to change its original purpose.

In Ohio, by providing that every bill shall be fully read on three different days ; that every law shall contain but one subject, expressed in its title ; and that no law shall be repealed, revived, etc., except in a manner substantially the same as that provided in the Pennsylvania Constitution.

In Michigan, by providing that no bill or new subject of legislation shall be introduced after the first fifty days of the session, except upon special recommendation of the governor ; that at an extra session only the subject for which the session is called shall be considered ; that a majority of each entire house shall be necessary to the passage of every bill, and the ayes and noes shall be taken and recorded ; that no law shall embrace more than one subject, expressed in its title ; that no law shall be repealed, revised, etc., by reference to its title, but that the original law and the change shall be set out at length ; and that no public act shall take effect till ninety days from the end of the session.

In New York, by providing that no civil law shall embrace more than one subject expressed in its title ; that no law shall be repealed, etc., by reference to its title, but that the original law shall be set out at length ; that no act shall be passed providing that any existing law shall be deemed part of such act ; that every bill shall be considered and read twice, section by section ; that every bill shall have three readings, no two of which shall be on the same day ; that every bill and its amendments shall be printed ; that the question on the final passage of a bill shall be taken immediately upon the last reading, section by section, and shall be taken by yeas and nays, which shall be recorded ; that a majority of each entire house shall be necessary to pass a bill ; that in the case of tax-bills and bills appropriating money or releasing any debt due the State, three fifths of the members of each house shall be necessary to make a quorum ; that every tax-bill shall in itself, and without reference to any other law or act, state the tax and the object to which it is to be applied.

VIII. *The trick of attaching to a general appropriation bill which, being absolutely necessary, will not be vetoed by the governor, an obnoxious item, thus sheltering the latter from the disapproval of the executive, is sought in Pennsylvania, Ohio, and New York to be remedied by giving the governor power to veto any one or more items, while the rest of the law goes into effect.*

IX. *The appropriation of money in a private law* is specially prohibited by the Illinois Constitution.

X. *The evil of a joint resolution's being used to avoid the governor's veto* has been remedied in Pennsylvania and Michigan by providing that every such resolution, except on a question of adjournment, must be approved by the governor, just like an ordinary bill.

XI. *The evil of awarding extra compensation to public contractors beyond the contract price, after the work has been begun*, is in terms prohibited in the constitutions of Illinois, Pennsylvania, New York, and in the proposed constitutions of Michigan and Ohio. In New York municipalities are also forbidden to do this.

XII. *The corruption which has arisen from the Legislature undertaking to release or make terms with debtors to the State* has in Illinois been sought to be remedied by prohibiting such action in terms. In Pennsylvania this is confined to the case of corporations. In New York the Legislature is forbidden to audit or allow any private claim against the State, but this shall be done according to law.

XIII. And *honesty* is sought in Pennsylvania to be secured by increasing the number of legislators, and thus making it more difficult to obtain improper legislation.

XIV. In Pennsylvania *certain railroad bonds had been by law declared legal investments for persons in a fiduciary capacity to make*, and this by the new Constitution of that State is expressly prohibited.

XV. In Pennsylvania *laws had been passed limiting the amount which could be recovered for an injury done by a corporation to the person of an individual*. By the new Constitution the passage of laws limiting the damages to be recovered for any injuries to either person or estate is prohibited, and it is provided that the statutes of limitations in such cases shall be the same for corporations as for individuals.*

XVI. *Inequality in the mode of prescribing or of exempting from taxation* has been sought in several of the constitutions to be remedied by a code of minute regulations too voluminous to be given here even in an abstract : they are to the general effect that taxation shall be uniform and for public purposes.

XVII. *Sectarian endowment* is in Pennsylvania and Illinois substantially prohibited.

* See I., *Weekly Notes of Cases*, Philadelphia, 319, where such laws seem to be regarded by the Supreme Court of Pennsylvania as void under the old Constitution.

XVIII. *Extravagant and improper expenditure of the public money and the lending of the State's credit or funds to private individuals and corporations,* and XIX., the same evils in *municipalities*, have been sought in several of these constitutions to be remedied by provisions even more numerous and detailed than those relating to taxation. They arrange exactly how the State's revenues shall be spent, and endeavor to predestinate for every dollar of the public money its final and inevitable fate during all time to come.

XX. *Certain offices which experience has shown to be sinecures or sources of corruption* — as, for example, the State inspectorship of merchandise, etc. — are in Pennsylvania abolished, and the duty of providing their substitutes relegated to the municipalities. While in New York, except so far as they may be necessary to protect the public health, the interest of the State in its revenues, etc., and for keeping a correct standard of weights and measures, the offices are abolished altogether.

XXI. *The system of paying certain officers, such as sheriffs, prothonotaries, etc., by fees for each service performed,* having in the large cities grown to be a double evil,—first, in paying the official inordinate compensation, amounting sometimes to more than a hundred thousand dollars a year ; and, secondly, in leading to great extortion and the charging of illegal fees, — it is provided in the new Constitution of Illinois that all the fees, with some exceptions, shall be paid into the public treasury, and that salaries fixed by law shall be paid the officer. The Constitution itself regulates the fees of certain county officers ; and as to court clerks, etc., provides that their salaries shall not exceed that of a circuit judge. In Pennsylvania it is provided that the salaries shall be fixed by law and the fees paid into the treasury. In Ohio, as to probate judges and court clerks, this is made the rule.

XXII. *The evils found to exist in private corporations, of such importance as to call for remedy,* have been provided for as follows : That of the *usurpation of too much power against the wishes of the stockholders by the officers and directors of corporations*, by providing, in the constitutions of Illinois and Pennsylvania and the proposed constitution of Ohio, that the stockholders shall choose their directors by the “cumulative” or “free vote,” under which a minority may have representatives ; and in Illinois and Pennsylvania, by providing that railroad corporations shall keep open books showing the amount of stock, assets, liabilities, etc. ; and in Illinois, by providing that the directors shall make an annual report to the auditor-general, showing the operations for the year.

That of undertaking enterprises outside of their legitimate sphere, by providing, in Pennsylvania, that no corporation shall engage in any business other than that expressly authorized by its charter, or hold any real estate except such as may be necessary for its legitimate business, and by specially providing that no company doing business as a common carrier shall engage in mining or manufacturing directly or indirectly, or hold any real estate, except such as may be necessary for its business.

In Michigan, by providing that no corporation shall hold real estate for more than ten years, except such as is necessary to the exercise of its franchises.

That of its officers managing the corporation in their own interest, by providing, in Pennsylvania, that no officer of any railroad or canal company shall be interested in furnishing material to such company or in the business of transportation as a common carrier of freight or passengers over the works of such company. In Ohio, by providing that no officer of any railroad company shall be interested in the receipts of such company otherwise than as an ordinary shipper, passenger, stockholder, bond-creditor, or employee, or in any arrangement which affords him greater advantage than are offered to the public, and all contracts for such a purpose are void.

That of "watering" railroad stock, by providing, in Illinois, that no railroad corporation shall issue any stock or bonds, except for money, labor, or property actually received and applied to the purposes for which such corporation was created; that all stock-dividends or other fictitious increase of the capital stock or indebtedness shall be void; that no railroad stock shall be increased, except upon sixty days' public notice, to be provided by law. In Pennsylvania, by a provision similar to the above, except that stock-dividends are not in terms forbidden, and that the provision is so drawn as to cover all corporations. In Ohio, by an enactment to the same general effect as this last, except that it is provided that corporation-stock or bonded indebtedness shall not be increased except in pursuance of a general law, nor until the consent is obtained of the persons holding the majority of the stock at a meeting held after sixty days' notice. In Michigan, by forbidding all fictitious increase of the stock or bonds of any corporation.

That of the trade in charters, which may be described thus: a person or party of persons, having influence in the Legislature, procure a charter authorizing an enterprise of a certain kind, say to buy and sell land, and by its general phraseology empowering them to do almost anything, with leave to change the corporate name. This

charter its procurers never intend to use, but obtain to sell to persons who do not wish to go before the Legislature and lay out their schemes. A railway-construction company, for example, buy this charter; that is, buy all the stock at a nominal price, or in some mode substantially the same, step into the shoes of the original corporators, change the name and object of the corporation, and, after the revolution, set to work. This evil, we say, was, in Illinois and Pennsylvania, sought to be remedied for the time being by providing that all charters in existence, at the time of the adoption of the new constitutions, should be void, if *bona fide* work had not been begun thereunder. (In Illinois ten further days were given.)

The evils arising from the fact that under the Dartmouth College case all charters, in absence of express provision to the contrary, are irrevocable, were sought to be remedied in Illinois, by providing that no irrevocable grant of special privileges or immunities should be passed. In Pennsylvania, by providing that as to all charters then existing and revocable, and as to all future charters, the Legislature shall have the right to alter, revoke, or annul. That the Legislature shall not remit the forfeiture of the charter of any corporation then existing, or alter or amend the same, or pass any general or special law for the benefit of such corporation, except upon condition that such corporation shall thereafter hold its charter subject to the provisions of the new Constitution.

In Michigan, by prohibiting the irrevocable grant of any special privilege or immunity; and by providing that the right of eminent domain shall never be so abridged as to prevent the Legislature from taking the property, franchises, etc., of incorporated companies for the public use the same as the property of individuals. And that the exercise of the police power of the State shall never be so abridged as to permit corporations to conduct their business in such a manner as to infringe the equal rights of individuals or the general well-being of the State.

That of the combination of rival lines to put an end to mutual competition, by providing, in Illinois, that no railroad shall consolidate its stock, franchises, etc., with any other railroad owning a parallel or competing line; and that no consolidation shall be made except upon sixty days' public notice, according to law, to all the stockholders. In Pennsylvania, by substantially the same provision, which is moreover extended to canal and telegraph companies; and it is further provided, that no one shall act as an officer of two such rival companies. The question, whether two lines are competing, to be settled by a jury, as in a civil cause, at the suit of a complainant.

In Ohio, by a provision that no railroad shall so consolidate their stock or share their earnings; that no one shall act as officer of two such companies.

In Michigan, by a more elaborate provision substantially the same as these last, with the further prohibition that between two such corporations there shall not be, as to rates of fare or freight, so much as an understanding.

The evil of inordinate charges is sought to be remedied, in Pennsylvania, by providing that all railroads and canals are public highways; that any association shall have the right to lay down a railroad between any two points; that every railroad shall have the right to intersect, cross, connect with every other railroad, and all railroads must receive and transfer each other's freight, passengers, and tonnage, without delay or discrimination; that all individuals, corporations, etc., shall have the equal right to have their persons and property transported over railroads or canals, and no undue discrimination shall be made in the charges or facilities for transportation. Charges between two stations shall not exceed that on the same line to a more distant station. And no discrimination shall be made between transportation companies and individuals.

In Ohio, by providing that the Legislature shall interfere to prevent unjust discrimination and unreasonable charges by a railroad company; that no charge between two stations shall exceed that in the same direction to a more distant station.

In Michigan, by providing that the Legislature may pass laws establishing the maximum rates of charges for transportation on railroads, regulate the speed of trains, and prohibit two railroads making such running contract that discrimination is made in favor of either as against other companies owning connecting or intersecting lines; that the Legislature may establish maximum rates of tolls or freights on canals; that all railroads shall be public highways and all railroads common carriers; that any association or corporation shall have the right to construct a railroad between any two points, and every railroad shall have the right to intersect, cross, etc., every other railroad; and all railroads shall receive each other's passengers, freight, etc.

Such are the abuses, real or supposed, which have grown up in our Commonwealths, and such are the remedies which have been applied. To look into these latter in detail would be too much of a labor to be compassed in a magazine article. Enough particulars having been given to allow every one to form his conclusions, it

is not necessary to do more than point out the striking features of the long statement I have just set forth, the first of which is the remarkable animosity shown legislatures and corporations ; no attack appears to be too vindictive, and no expression of distrust too insulting, when they are the objects. The assumption is that these are the sources of all public immorality, that they must be rigorously controlled, and that the constitutional provisions cited are adequate and effective for the purpose. It is true that most State legislatures are composed of men of low tone, ignorant, selfish, and easily debauched ; it is also true that transportation corporations are often recklessly managed, are apt to be in the hands of unscrupulous men, and the relation between them and the State government is sooner or later one of bargain and sale. It is desirable, moreover, that this state of things shall be stopped, if not radically, at least to some appreciable degree, and it is necessary that some of it should be done through constitutional enactment. Having premised this, it is first of all for us to ascertain the boundaries within which a constitution must contain itself, and passing beyond which, it becomes a statute, a code, whatever one pleases, but in no proper sense a constitution. How far these new constitutions have kept within their natural sphere, and how far in going outside imperative need can be shown, is the question which will afterwards come next in order.

A written constitution then in this country has, by universal agreement, been regarded as necessary. First, to declare the inalienable rights of the individual citizen, which cannot be trespassed upon by the government without a violation of those principles of freedom which, in the mother country, are enunciated in Magna Charta, the Petition of Rights, the Bill of Rights, etc., and here in the Declaration of Independence, and the succession of public manifestoes which followed its lead. The next office of the constitution is to provide for and define the departments of government, executive, legislative, and judicial ; as to the first, regulating the governor's term of office, his patronage, and his veto power ; as to the legislature prescribing the number of the representatives, the relation of the two houses to each other, the manner of meeting, and the general way of doing business ; and as to the judiciary, provid-

ing for courts of civil and criminal jurisdiction, for appellate tribunals, and for the exercise of the power to grant the writ of *habeas corpus*, leaving every detail to the legislature ; this, with the definition of the electoral suffrage, made up the substance of a State constitution, as the latter has existed in the past. Amendments of a precise nature have from time to time been added to check evils confessed to be of sufficient magnitude and permanence to call for notice. Such, for example, are the provisions making all future charters revocable, or forbidding the government, State or municipal, to undertake or assist in enterprises of a private kind. And here we come to the point from which the constitutional movement we are now considering started. As has been said before, it came from the West. The fundamental charters of the States which grew up with the emigration into the Mississippi Valley did double duty as constitutions and codes till statute law should be framed ; without local usages or historical tradition, except of a vague kind, their constitutions had to supply the place which in the quondam Colonies the common law sufficiently filled. Naturally many enactments statutory in character remained as part of the constitution long after the time when the legislature might very well have taken them within its own cognizance ; and so the jurist of the prairies saw nothing to shock his sense of fitness in constitutional provisions minutely enacting homestead laws, for example, or describing what labor should be exercised by convicts in the public prisons. Thus far very little harm resulted, beyond educating the politician in a radically false theory of constitutional law ; but when, in the course of time, the legislature began to deteriorate in purity and intelligence, and wholesale bribery became a rule with scarcely an exception, the people, after enduring the evil with that good-natured tolerance so eminently American, came at last to consider how these things should be stopped. A constitutional convention was the first engine thought of, and little time was lost in getting it to work. Now, constitutional conventions, though abnormal and certainly dangerous bodies, have proved themselves honest, and neither more nor less wise than their constituents. Their most conspicuous quality was, therefore, as may be supposed, an audacity of suggestion which

was tempered neither by a consideration of the unscientific character of the reforms proposed, nor, what is surprising, by any anticipation of the practical futility of these latter. This gives the key-note to the whole of the work by which the "organic" law of Illinois in 1870, and of Pennsylvania in 1873, was revolutionized. The new Constitution of Illinois fills a quarto pamphlet of fifty pages, and, as the citations from it already given show, is a voluminous body of legal enactment. It does not cover so much ground as that of Pennsylvania, which is in reality an amplification of it, but its ludicrous points are more numerous, and its trans-Allegheny simplicity very marked. It provides, for one example, against two grades or qualities of grain being dishonestly mixed in an elevator; it defines with great nicety the meanings of the words "office" and "employment" respectively; and it takes the pains to tell us how "a frequent recurrence to the fundamental principles of civil government is absolutely necessary to preserve the blessings of liberty." It does not touch the most radical of all our troubles, dishonest elections, and contains so little not in the Constitution of Pennsylvania, that in discussing the latter we treat *it*, except in one point which is not to be passed over, the introduction, to wit, of the "cumulative" vote into the elections for members of the Legislature. However much mistaken we may think this attempt to be, it has the surpassing merit of recognizing and giving a proper importance to the fundamental evils of the State, and is an effort to work at consequences by controlling the cause, instead of the converse method. Except a similar clause in the rejected constitution of Ohio, it stands alone. How far Pennsylvania has conceded the principle of proportional representation will be seen later.

To take up the Pennsylvania Constitution, we have the provisions which are intended to secure fair elections and true election returns,—provisions which are found in no other constitution, and which have been claimed to possess much excellence. They are three,—numbering the ballots, putting the voter to his oath of purgation, and the supervision by the courts through inspectors. To the first and last of these no inconsiderable efficacy must be conceded; and if not followed by corresponding drawbacks, they will take their position as valuable

reforms. The question, whether they have any business in a constitution at all, and do not properly belong to a statute, will, with a host of like enactments, be examined hereafter. The *evil* which must result from numbering ballots is obviously the utter violation of the secrecy of voting ; by this plan an entire class of men, in whose hands such knowledge is most dangerous, because they have the greatest interest in, and the readiest means of misusing it, are made the depositaries of the most sacred confidence of the citizen. Party organization becomes at once an inquisition which knows the exact position of each voter in the State, and which, while preparing for an election campaign, can have before it a table wherein every voter's name will be set down with the full details of his vote. Such a result requires no comment. On the other side, it may be said that under the ordinary plan dishonest election judges could open the boxes and read each vote as it was put in ; so they could, and certainly often did, but such conduct, it must be remembered, never received the sanction of law. But now, from the earliest suggestion of the "numbering" plan, it has been admitted that, so far as the election assessors were concerned, secrecy of voting is legally abolished ; and at the first election held under the new Constitution of Pennsylvania, the writer was told by one of the election judges that his ballot proved very diverting to these persons, because of the way in which certain candidates were scratched. Though secrecy is given up, not one of the disadvantages of the ballot system is removed, nor any of the decided advantages of the *viva voce* plan acquired. So much for the most important step taken for many years to secure reliable elections.

The invocation of the courts is little less serious than the remedy just considered, and is too, while certainly specious, a very questionable step. The principle, as it happens, is in Pennsylvania not new, though it is believed not much known elsewhere. It took its origin in the plan by which certain fiduciary duties which rested upon the city of Philadelphia were deputed to "commissions" as they are called, being small bodies of gentlemen acting like boards of trustees or directors. These commissions were appointed by the county courts, and were at first so admirably constituted that a new era seemed

about to open, and for a little while the darker side of the picture was not seen. It was not long, however, before it was found that a system which called upon the judges to perform duties so foreign to their office was clearly injuring the judicial tone ; that it led to disputes, almost to intrigue ; and that, though all this was as far as possible decently concealed, the higher minded of the judiciary united in deplored the position in which they were placed. Nor was this all ; as time went on, in each of the commissions more than one notorious corruptionist pushed himself into a vacant place, with the help, perhaps, of a judge whose integrity when acting as a judge no one would for a moment think of doubting. In a word, the judiciary were being tainted by the evil which had been, it was thought, destroyed, because merely driven from the other parts of the political body. Now in the light of these facts, is a law by which further non-judicial duties, involving great responsibility and no inconsiderable temptation, are placed upon the courts, one which a statesman is to recommend to his constituents as a beneficent reform ? * The last point to be noticed in this connection is the oath which the voter must take if challenged at the polls. The good likely to be accomplished by it is very small ; election bribery, in the first place, is amazingly rare in this country, and such as does exist, or may grow up in the future, can be as easily if not more easily carried out mediately than immediately ; and the "bribable" class is not one which finds much trouble in considering that not to have been done at all, within the meaning of an oath, which has only been done indirectly.

It is, too, a very characteristic feature of the movement we are discussing to attempt to banish fraud by oaths, when the whole current of modern thought is consistently against them and consistently in favor of their gradual reduction, if not abolition. In this matter, as we shall see, the Pennsylvania Constitution shows the completest disregard of the enlightenment of the age.

The next point in order is the provision in the Pennsylvania

* See 7 Legal Gazette, 117, for a spirited and convincing protest against such schemes, made by Judge White of Pittsburgh, who cites, in support of his position, some interesting Federal decisions.

Constitution for a Board of Pardons, apparently unexceptionable and one which cannot but very considerably lessen an evil which at all times has proved of much seriousness ; the political workers, who come many of them from the criminal classes, having grown to regard themselves as privileged to violate any law, because secure of a pardon from a governor to whose election they may have contributed to a degree which should call for recognition. This provision, it is well too to notice, is properly a constitutional one.

In this place it may be said that the accumulation of cases in appellate tribunals, which has become a grievous and increasing wrong, receives no notice in any of the new constitutions, except the proposed one of Ohio, which provided for the existence of a lower court of appellate jurisdiction, and wisely left it to the Legislature to say how much business it should divide with the Supreme Court. The failure to act in this matter by the other States, especially Illinois and Pennsylvania, the two which assumed to do so much, is almost without excuse.

And now we come to the gravest of all the late constitutional changes,—the one which not merely Illinois, Pennsylvania, and Michigan, but Ohio and New York, unite in favor of,—that, namely, which circumscribes the power of special legislation. The Constitution of Illinois forbids the Legislature to deal with twenty different classes of subjects stated above, except through general laws ; that of Pennsylvania, these twenty with twenty more ; New York, seventeen, most of them corresponding with those of Illinois ; Michigan, some nineteen ; while the proposed Ohio constitution contented itself with providing that all general laws should be uniform ; that no privileges shall be granted to municipalities or corporations, except by a general law ; that, while the Legislature may divide the municipalities into classes not exceeding six, the laws as to each must be general. In the first place it is to be observed, that the practical benefits which flow from these changes are obvious and very considerable, while the harm to those needing only honest legislation is most of it problematic and exceptional. The principle of fettering the Legislature by the spasmodic enactments of a constitutional convention

will be considered in a moment. The arguments in favor of the restriction are, briefly, that the subjects mentioned are ones for which general laws are usually adequate ; that the time of the Legislature will not be taken up with private interests ; that matters of general importance will be better considered ; that the laws will be more equal ; that a source of corruption will to a certain extent be closed,—in these last two respects the prohibition of granting special privileges to municipal or private corporations will be found particularly beneficial ; and that the volume of the laws will be reduced and the expenses of government be diminished. On the other hand it should be admitted that special legislation is not only not a necessary evil, but in the hands of a reasonably trustworthy legislature is an ordinary and recognized, and often the only means of accomplishing measures of utility and justice ; and that it is a hazardous assumption that in the classes mentioned general laws, however efficacious in a normal state of things, will answer in a public or even private emergency, the hazard increasing almost in a geometrical ratio with the increase in the number of prohibited classes : a close examination of the Pennsylvania Constitution would, it is believed, demonstrate this. It must be remembered too that the prohibition of special laws will give rise to general laws passed to meet a special case ; the general law, however fitting in the one instance, being many times injurious in its unrestricted operation. Nor is this evil a new one : a good illustration is furnished by a statute which was passed a few years ago in the writer's State. It was desired to make a certain executor file an account of a certain description, and in order to effect this result a general law was passed that all executors so situated should file such accounts. Now, whether a special law would have been proper or not in this case I do not know, but it is a fact that the general law as passed was an evil without mitigation, and if not condemned as unconstitutional, for reasons which do not concern us, would have caused endless vexation and injustice. It is, too, by no means an uncommon experience for a man in public life to see a general law about to be passed under such circumstances as these, and to find that the only compromise he can make with the promoters of

the measure is to persuade them to change the law from a general to a special one. In how many cases under the new system will not this refuge be found closed ! In other words, the evil of general laws passed to meet special cases, which has always been grave, must be greatly enhanced by a constitutional provision hampering special legislation. So that such legislation should only be forbidden in the cases for which general laws have satisfactorily been found to answer. Nor should it be forgotten that the doubt which must continually arise whether or not a given act is special or general, illegal or legal, will throw much additional work and responsibility upon the courts, thus, with the provisions already spoken of a little above, and with the crop of questions which must spring up with the introduction of an elaborate constitution, overweighting them in a way really dangerous. The universal uncertainty inevitably prevailing in the interval between the passage of a law of doubtful constitutionality and the final adjudication upon it is an evil important enough to be noticed. Another hurtful result of the restriction upon legislation is in the centralizing effect which must follow a system of enactment which dwarfs and cripples the sovereignty of the State : especially is this the case with the provisions of the Constitution of Pennsylvania rendering counties unamenable to special laws. The citizen will come to feel but two interests, that of his municipality, and that of his nation : Pittsburgh and the United States will be everything ; Pennsylvania, nothing. So much for the practical aspect of the question ; much more serious is the *principle* of this revolution. Is it true, as has been said, that, in America, a State is governed by two legislatures, the one, ordinary, regular, subject to the governor's veto, under the Constitution, and personally responsible to the people ; the other, abnormal, irregular, one-chambered, subject to no constitution, and, in so far as the desire of re-election makes a representative so, in no degree responsible ? In other words, is our constitutional convention — that assemblage whose asserted omnipotence M. Laboulaye has shown to have such possibilities of perdition for a nation — a recognized legislature ; and what other effect can follow but that the abridging of normal legislative power must make the body which issues

the prohibiting enactment necessarily such? If yes, have our needs been so desperate and this reform so valuable that, principle or no principle, we must adopt it? These questions are in point, and must, by the indorsers of the late movement, be sooner or later answered.

It may here be mentioned that in Illinois and Pennsylvania the legislature is further chained down to the limit of biennial sessions; and the people, whom it preys upon, given one year of repose in every two.

Bribery in the legislature is the next subject before us. In Illinois, Pennsylvania, and New York an oath is prescribed for the legislator, wherein he says with an elaboration of detail that he has not paid, or caused directly or indirectly, or promised to pay anything, etc., etc., to procure his election. In Illinois and Pennsylvania he also swears that he will not receive, directly or indirectly, anything, etc., etc., to affect him in the discharge of his official duty. The Pennsylvania and New York provisions apply to all State officers. As has been said before, the wisdom of such means to correct public evil is becoming more doubted every day. Oaths are being regarded as demoralizing to a high degree, easily evaded by those at whom they are especially directed, and their multiplication is treated by every publicist of eminence as one of the most significant of all signs of political impotency. The writer heard three very respectable professional gentlemen, on being inducted into their places as judges, make the following abjuration: —

"I do solemnly swear (or affirm) that I will support, obey, and defend the Constitution of the United States, and the Constitution of this Commonwealth, and that I will discharge the duties of my office with fidelity; that I have not paid or contributed, or promised to pay or contribute, either directly or indirectly, any money or other valuable thing to procure my nomination or election (or appointment), except for necessary and proper expenses expressly authorized by law; that I have not knowingly violated any election law of this Commonwealth, or procured it to be done by others in my behalf; that I will not knowingly receive, directly or indirectly, any money or other valuable thing for the performance or non-performance of any act or duty pertaining to my office, other than the compensation allowed by law."

The spectacle was humiliating. The New York oath is, it should be said, not only not promissory, but is much more concise and simple than the above.

Legislative bribery is further sought in Pennsylvania and New York to be remedied by giving a wider definition to the crime, and increasing its punishment; and by abolishing the privilege which every witness has of not testifying to anything which may subject him to a criminal action. These provisions are all good as far as they go; but two things must be considered: first, whether they belong in a constitution; and, secondly, whether they will accomplish any result not attained under the previous condition of things. The former seems questionable, unless the latter can be answered most satisfactorily. Nothing is more difficult in our meridian than to discover and punish legislative bribery. It can be done so secretly, so indirectly, and the parties to the transaction have so strong a motive for mutual fidelity, that hitherto the only efforts to stop it, proposed by intelligent men, have been in the direction of attempts to send incorruptible men to the legislature. Now, will the fear of being fined or imprisoned for a *felony* restrain a man who laughed at the danger of the same punishment as for a misdemeanor? Will parties be any more ready to betray the guilty under an adverse examination than they were under an offer of immunity upon turning state's evidence? Will the sanction of a constitution have any more awe than the sanction of a statute? In turning our constitution for the purpose into a criminal code, have we by the sacrifice of principle accomplished any immediate or practical result? It is much to be feared not.

We now come to the tricks by which legislation is procured. These and their new remedies I cannot consider as should be done, further than to say that in detail they are most of them good and apparently effective. They recognize evils which have existed, and try to meet them. But their effect, as a whole, which is of much more consequence than even the sum of their particulars, depends in the first place upon the question, whether they are mandatory or merely directory; whether, in other words, there is any sanction to compel obedience to them on the part of the legislature. To take, as an example,

the case of a statute asserted in a court of justice in Illinois, Pennsylvania, or New York to be unconstitutional because not read on three different days, would the court receive evidence that two readings took place on one day; would the court go behind the implicit assertion made by the legislature that it had acted regularly in passing a law published by it as a statute of the State? If not, of what efficacy is this constitutional provision? If yes, what, on the other hand, are the disadvantages, if any, likely to follow a rule under which regularly promulgated statutes may be impeached by matter outside of the record? These are two serious questions. To consider the latter alternative first, the doubt presents itself, whether the check, which holds the legislature to deliberation in law-making, will be productive of enough good to outweigh the dangers to which a law constitutional on its face, but liable to be overthrown by a revelation of facts which the citizen has no means of investigating, must put every one in the Commonwealth who is compelled to act under it. The further evil will here follow too, of throwing still additional responsibility upon the courts, already, under some of these new constitutions, as has been said, dangerously overweighted. If, on the other hand, the courts hold that such a result as this is the reduction to an absurdity, and that they are powerless to impeach the action of a co-ordinate branch of the government, except for matter appearing as of record, will the moral effect of a mere constitutional direction be sufficiently great in the way of controlling the legislature to compensate for the harm which must attend the insertion into a fundamental law of a *brutum fulmen*? This is not easy to answer; the probability is, that if such directions are not too numerous or minute, the legislature will, under most circumstances, respect them. That such shall be the case the legislature must show itself a much more honest body than the new constitutions of Illinois and Pennsylvania, for example, assume it to be. To an assembly radically corrupt the most stringent of these provisions will be withes of straw.* One enactment, which occurs only in the Pennsylva-

* On March 14, 1875, an all-night session of the Legislature of Pennsylvania was held at Harrisburg, at which the members became intoxicated, quarrelled, yelled so as to stop motions, gave each other the lie, and finally resorted to an

nia Constitution, is exceptionally indefensible, that, namely, which provides that no bill on its passage shall be amended so as to alter its original purpose. The wrong intended to be stopped by it is the old trick by which a given object is designed to be secretly accomplished through an amendment whose effect the Legislature fails to appreciate. The provision was well meant; but how a body of ordinarily intelligent men deliberately proposed such an article for the Constitution of their State is, to say the very least, inexplicable. If the courts decide it to be directory, the Legislature would not and should not obey it. If it is mandatory, how can a conscientious legislator offer any amendment or a citizen trust to any amended law? What was the original "purpose" of an

effective expedient for forestalling obnoxious legislation by breaking into the cellar and turning off the gas. The newspaper report winds up as follows:—

"The house then engaged in a second violent contention as to the priority of bills, and the scenes became once more utterly disgraceful. During the controversy the Speaker announced that some person in his hearing had called the chief clerk of the house a 'liar,' and in order to preserve the dignity of the body he asked that the person be ejected. This was done.

"Bills were then called up by the representative having the best lungs and being most lucky in attracting the attention of the Speaker, and the members apparently knew little and cared less about their contents. This continued till half past six o'clock, when Speaker Patterson, who was still on the floor, said that the members were leaving so rapidly that it would be advisable to adjourn.

"This was met with cries and yells of 'No!' and was lost, and then the scramble recommenced. It was discovered that the bill making appropriations to the Eastern Penitentiary had never passed beyond the first reading, and it was taken up on motion of Mr. Faunce, and passed through a second reading.

"The rapidity with which the bills were disposed of was so great that Mr. Reyburn at one time refused to vote for any more unless the titles were announced. Half of the members' seats were vacant, and the majority of those present crowded to the front of the Speaker's desk, and in their eagerness, in many cases, to attract the Speaker's attention, held up their hands and hats like bidders at an auction. The noise was distracting.

"One member moved to consider some bill by its number, and forthwith amendments were proposed, adding two or three other bills, and the whole batch would be hurriedly read and passed through a second reading.

"At one stage of the proceedings there were not over sixty members in the hall. The fact of there being no quorum became so palpable that the Speaker at last took cognizance of it, and a point of order was raised to that effect. The good-natured member who had raised it finally consented to withdraw it, to allow just one more bill to pass, and it did pass — being twenty sections long — in three minutes by the watch.

"At a quarter past seven o'clock the session of the house ended by a motion to adjourn."

act (the writer is not responsible for this English ; " purport " was probably meant), how far is a given amendment in accord with it, are problems which, in the legislature, must be met upon every amendment offered. The same questions, with the further obligation of studying the journals of the legislature for the history of the statute, must be met by every private individual who proposes to act under it. That particular division of this class of provisions which enacts that bills must contain but one subject expressed in their titles ; that no law shall be revived, repealed, etc., by mere reference, etc., etc., are not only good and easily enforceable by the courts, who can adjudicate the question by looking at the face of the act, but are also proper subjects of constitutional interposition. The provision in the constitutions of Pennsylvania, Michigan, and New York, requiring a majority in each house of the legislature to pass a bill, and prescribing the recording of the ayes and noes, ought to prevent the continuance of the wrong which has often heretofore been done by small bands of conspirators who would meet to push through legislation which with a full quorum must have been stopped at once. The recording of the ayes and noes would let a flood of light into the dark places of our capitols. But both these enactments, like those already spoken of, if mandatory, must cause a very considerable amount of danger and uncertainty to those who are affected by the statute law; that is, every one to a greater or less extent. If directory, how far will they be obeyed ? The rest of this particular class may be dismissed with the general comment that they are good, though few have any pretensions to being radical.

The next subject for our consideration are the provisions as to taxation, which may be said to be wise and effective, and open to criticism only in two respects : first, as still further restricting the function of special legislation ; and thus, secondly, adding to the duties of the court. The distrust too which is shown in limiting the power of the legislature to exempt from taxation seems groundless and may work hardship.

Extravagance on the part of State and municipal governments has, in all these new constitutions, been noticed.

In that of New York, to the extent of forbidding the State and its municipalities to assist private enterprises pecuniarily ; and in the other constitutions by this together with further and more precise provisions, limiting to a given amount in gross or to a percentage of the value of the public property the power to contract debts. The advantages of these provisions are obvious, and, though philosophically they are not constitutional in character, the evils they are intended to remedy are so glaring and universal, and the legislature in this respect so utterly untrustworthy, that, if they are effective, they will be accorded the right of being. That they will be effective can hardly be doubted. The only question is, whether or not there are accompanying drawbacks. This species of law is not new at the West, and though beneficial has also shown itself troublesome. The difficulty has been when State or municipal bonds, issued in excess of the legal limit or without a previous popular vote regularly held, have found their way into the hands of *bona fide* holders about whose claims the courts think long before disallowing them. In any serious emergency this withdrawal of its natural powers from the legislature may be a source of danger, and even in ordinary times give rise to unexpected complications, especially in municipalities. By the Pennsylvania Constitution all the revenues beyond the ordinary and current expenses of government go into the sinking fund, which seems carrying the discipline of economy to the pitch of asceticism.

The spirit of these enactments, however harsh, may be justifiable in view of the recklessness and extravagance of the past ; but let us understand that we are doing penance, and not pretend to say that such a course is a normal one for a healthy commonwealth.

The question of the fee system, by which certain public officers make large fortunes from a two or three years' tenure, has grown lately into great importance, for increase of appetite in the shape of shameless extortion has followed the increase of official pay. This the legislature, though much urged, has always failed to deal with ; and popular impatience, fretting at the slowness of the natural way of remedying such an evil, turned with that readiness already spoken of to the constitutional convention for help,— a god which, not rating

its true dignity very high, was not unnaturally asked to unravel a knot which should have been thought unworthy of it. In Illinois and Pennsylvania, and in the proposed constitution of Ohio, it is provided that, as to a number of offices, salaries should take the place of remuneration from fees; the latter being ordered to be placed in the public treasury: a wholesome and valuable reform which should have been waited for, however, till extorted from the legislature.

Thus far we have had to do with enactments which, however legislative in their character, were at least upon subjects over which, in a general way, the domain of constitutional law extended. But we now come to an elaborate body of provisions which, neither in the principles which govern them, the results they propose to reach, nor the matters as to which they are enacted, are anything else than merely statutory; those provisions, namely, relating to corporations. In this connection the constitutions of Illinois, Pennsylvania, and the proposed constitution of Michigan are most conspicuous. In Ohio there is not a great deal on the point, though what there is is in the same spirit as the three other codes; and in the New York Constitution there is nothing further than the prohibition already described of special legislation granting corporate privileges. The corporation articles in the first three constitutions just referred to are directed in many cases against imaginary wrongs; such as that of extortion by transportation companies, who, having done more than any other agency to develop this country, are not, as a rule, earning six per cent on the capital invested in them. These articles are, we repeat, directed in many cases against imaginary wrongs, are voluminous, and are, as will be seen, futile. Nine tenths of each of them represents elementary law which the courts have always held themselves ready to enforce, and which, if ineffectual to prevent certain evils from flourishing in corporate bodies, was ineffectual through no defect in the law itself, but because the courts were practically helpless, having no right to interfere except in extreme cases and when the facts were clear. The courts can no more undertake to supervise the financial management of a railroad than they can stop stock-gambling; and how fulminating legal platitudes in a consti-

tution is to make any change one would wish to be shown. To give some examples of these latter, it is declared that railroad corporations are common carriers ; that in the matter of freight and charges they shall exercise no unjust discrimination ; that they shall undertake no enterprise not strictly warranted by their charter ; that corporate officers shall not make private gain improperly from the corporation ; that corporations shall not make fictitious issues of stocks or bonds, etc., etc. The rest of this subject can be considered briefly. The prohibition of the grant of irrevocable immunities is excellent, but not at all new. One of the first new features is that found in the Pennsylvania Constitution in the form of a provision as follows, which being the latest and fullest blossom of the Western spirit of Reform is given entire :—

“The General Assembly shall not remit the forfeiture of the charter of any corporation now existing, or alter or amend the same, or pass any other general or special law for the benefit of such corporation, except upon the condition that such corporation shall thereafter hold its charter subject to the provisions of this Constitution.”

Here, as once before, in examining this Constitution, the exaggeration of criticism is less emphatic than the statement of the proposition in its own naked absurdity. One of two parties to a contract addresses the other in this way : “I made a contract with you for which you gave me consideration. I see that I am bound ; but unless you agree to release me, I shall not only make no contracts with you, nor do you any kindness, but I shall not even extend to you a single measure of justice which you may demand of me.” What, too, is a law for the “benefit” of a corporation, or can there be such a law ? Must not all laws be conclusively presumed to be enactments of justice, right, and expediency for the benefit of the State and of the State only ? How far will the fact that a corporation must derive benefit from a law passed at no instigation of its own and avowedly for public ends bring it within this provision ? If what would be laughable elsewhere were not of grievous moment when deliberately incorporated into the constitution of a great commonwealth, these suggestions thus cursorily given would not have been made. The next provision in order of importance and calling for special notice is perhaps that

which, in the Constitution of Pennsylvania and the proposed constitution of Michigan, declares it to be the right of every person to lay down a railroad between any two points and to connect with, intersect, etc., any other railroad. Here again, judicial interpretation must determine the extent of the proposed change. Does it mean that when a person comes to the legislature with the demand for a charter which shall allow him to build a railroad between two such points that the road must for its greater distance pass through the suburbs of a large city or through a public park, the charter cannot be denied? Or, on the other hand, if the legislature has any discretion, how much has it? That when this provision has passed the purgatorial fires of the courts it will come out anything else than the old law, it would be rash to assert. By the Constitution of Pennsylvania, and, strange to say, by the proposed one of Ohio, it is provided that no charge on a railroad between any two stations shall exceed the charge for a longer distance, etc. That unequal rates, low where there was a competing line and correspondingly high where there was none, were ever so much a cause of injustice as to justify the constitutional law-maker in descending to such pettiness, is not to be imagined. The clause even in its place as a statutory regulation could furthermore be easily evaded, and if stringent would often be unfair, as might be shown. The provision in the Constitution of Illinois and the proposed constitution of Ohio, to the effect that no corporate stock or indebtedness should be increased without a certain fixed notice to the stock-holders, if a statute, would have no little good effect; the question as to how far the rights of *bona fide* bond-holders are to be affected by its violation would always, however, arise. In Illinois stock-dividends, without an exception, are forbidden. What is to be accomplished by this, in so far as it makes any change in the law which always regarded such transactions as illegal if fictitious, it is not easy to see.

Before coming to the "cumulative" vote provided for the case of elections of corporation directors, one new and at first sight very strange provision in the new constitutions of Illinois and Pennsylvania, and in the proposed constitutions of Ohio and Michigan, calls for notice. It is that which provides

that no railroad shall consolidate with, lease, control, or share the profits of any competing line. Herbert Spencer has laid it down, that where combination is possible, competition must cease. Have our constitutionalists, in the enactment just given, shown themselves able to cope with this law of trade? In the first place, can the law be evaded, for evasion is generally the outcome of a struggle between the law of a legislator and the laws which govern the natural movements of mankind? Will two railroads go on cutting each other's throats, because the constitution tells them to? If a real, however tacit union is what they tend towards merely by following an enlightened instinct of self-interest, will a constitutional veto have any more power over them than it would over the chemical combination of two molecules? In Michigan, railroads, if parallel, etc., cannot have so much as an "*understanding*" with each other. By what sanction this unique decree is to be enforced does not plainly appear. Was it in the accomplishment of such purposes as these that our jurists, derogating from their great functions, left the sphere of constitutional law to put in force a useless and vexatious code of ridiculous regulations? Was it for what men, ignorant enough to believe in such quackery, and presumptuous enough to build on the solid foundations of the old constitutions the flimsy fabric we have been viewing,—was it, let me repeat, for what such men could give that two Commonwealths like Illinois and Pennsylvania have exchanged the sanctity of their time-honored charters, casting these aside for codes which must be the sport of common litigation, and the ridicule of that corruption they are without the power to strike? Finally, in Illinois and Pennsylvania, and in the proposed constitution of Ohio, the rights of a minority of the stockholders of corporations are sought to be protected by providing that the directors of corporations should be elected by the "*cumulative*" vote; and this leads us naturally to the last and most interesting, probably, of the features of the late reform movement, and one which will be considered before passing to a discussion of the deficiencies, and in general the negative faults of the instruments before us; it is the introduction of proportional, or, as it is often called, "*minority*" representation into the new constitutions of Illinois and Penn-

sylvania, and the proposed constitution of Ohio. Now the various plans by which it has been designed to bring about proportional representation are so essentially different in both principle and method, that they have very little in common further than in the effect of limiting the absolute majority rule. Those ordinarily proposed are four: the "limited" or "restricted" vote; the "cumulative" or "free" vote; the "Gilpin" or "Geneva" plan; and the "Hare" plan.

The latter two, so far as theory goes, are indubitably just and certain; their practical aspect it is not proposed here to discuss. The "limited" or "restricted" vote gives, it may be enough here to say, a representation utterly out of proportion to the relative strength of the parties, and is moreover uncertain. The "cumulative" or "free" vote, on the other hand, while not as directly unjust in the same manner as the "limited" vote is, works more dangerously, through its uncertainty. As Mr. Stanwood in the number of this magazine for July, 1871, has said, it passes the cudgels from the majority to the minority. Mr. Horton, in the Penn Monthly for June, 1873, says:—

"The larger the district the more dangerous the peculiarities of this system. Were it tried on such a scale as that of congressional elections in Ohio, anything like fairness or proportionality would at first be impossible. Tending, as it plainly must, if unrestrained, to make representation fluctuating and disproportionate, it would eventually compel the tightening of the already oppressive bands of party discipline. In general the scale which, under the present district system, tends now to majority and now to minority, would be permanently weighed down in favor of the minority."

Such is the plan by which in Illinois and Ohio it was sought to open an epoch of reformed suffrage, and by which in these States, together with Pennsylvania, corporations were to be purified. To take the latter case first as of lesser importance, we will remember that in corporations the vote is by shares, and then consider what an absolute chaos a corporation election under this system must be; shares too which in the larger organizations are purchasable in the open market, and after being used for election purposes can be sold with little or no loss, perhaps indeed at a profit. It would be a demonstration

easy to make to show with how little money a Drew or a Gould could capture any railroad in the country ; yet to this momentous danger the constitutionalists of three of our largest States seem to have been absolutely blind. In regard to the adoption of the cumulative vote introduced in the new Constitution of Illinois and the proposed constitution of Ohio, in elections for members of the State legislature, it may be said that as the district system does not appear to have been given up, and as therefore the number of places to be filled at any one time cannot exceed three or four, neither the good nor the bad effects will be very appreciable : the good, on the whole, probably prevailing. The reformer, in his anxiety to bring about proportional representation, might advocate a constitution which contained in such a shape this measure, looking upon it as a surrender of the unqualified majority principle and as a means of educating public opinion in order to lead to something better. Mill spoke and voted for the limited vote, and commended the cumulative vote as a *pis-aller*, being prepared to be ultimately satisfied with nothing short of the Hare plan. But with all deference to that great authority, it is urged that no good will come of paltering with one's sense of right in this matter. These proposed systems of voting are wrong and unjust, and are dangerous stepping-stones. The first result following their introduction into this country will be probably great indifference : the absolute unconcern with which the public in Pennsylvania regarded the late spectacle of two judges of the highest court of the Commonwealth being to all intents and purposes appointed to their places by irresponsible nominating conventions, was to a thoughtful mind nothing less than appalling. The next consequence will be that, the first time the wishes of a strong majority are thwarted in an exciting contest by some glaring injustice of this plan, the old rule will be violently brought back, and the day of the adoption of a genuine system of proportional representation be only further put off. Nothing is more easy than to experiment with a badly constructed machine, and then to condemn the invention.

Having in all the fulness essential to fairness considered the late reform measures, the subject of those evils which there

has been no attempt to meet, and of those which, calling for radical treatment or none, have been dealt with merely on the surface, comes properly before us. The story is too long to be told now, but in the form of bare suggestion, which is all that can be given to it, it carries, it is claimed, an emphasis which needs no help from rhetoric. The trouble which has made what we are accustomed to call our institutions a failure, for so deplorably many purposes, has been the gradual but consistent deterioration in the character of the managers of our government, accompanied at the same time by a tendency on the part of all original political power to lodge in the lower middle classes of the community,—creating an aristocracy from which refinement, cultivation, and the higher results of education are invariably excluded, rendering those who have these last qualifications little better than disfranchised, and thus bringing about a state of things in the representative bodies which there has been an attempt, as we have seen, to end by the express and particular constitutional prohibition of each pernicious consequence as it has shown itself. How fallacious and futile is this plan it has been the aim of the present article to show. Not to further suggest the true starting-place and the only direction to be taken which can lead to a permanent result for good, would be to leave the subject at an unsatisfactory stage. The station, let it be therefore said, from which we should begin is the recognition of the fact that our people, while enjoying the inestimable advantage of a fresh start in a land of high natural resources, and with a capacity for freedom and self-government, the exclusive property, many think, of our race, has in cutting itself off from the Old World lost much that would help our present exigency. We have no class possessing leisure, for whom money can have no temptations and whose ambitions are almost necessarily honorable. We are, or we think that we are, not able to pay for anything other than a cheap government; and we will not say to the possible aspirant for political greatness, "You need have no fear as to those hostages to fortune, your wife and children; if you are worthy, your future is assured." We rather say, "Give up your profession, your business, and we will give you a short term of office with a beggarly compensation; and as to

your future afterwards, that shall be as it may." Ought the consequence, that all our best, and nearly all our ordinary, administrative ability is to be found in business-houses, the corporations, or in absorbing professional pursuits, to astonish any one? We have staked our fate, too, upon universal suffrage and all its results, and must take as a factor in our calculation the difficulties of a system where the vote of the least worthy counts for as much as that of the most worthy; and we must not forget the fact that at the same time we forbid representation to any order, class, or congerie of men, however pure may be their aims, or valuable their judgment, unless they persuade to their views the majority of what for the purpose in question may have to be regarded as an ignorant and insensible vulgar. We have also in full operation a superficial public education, which brings men to the point of desiring political success, without raising them to the degree of moral and mental cultivation which, and which only, would fit them for a statesman's career; an education which, yearly, too, turns out by the score conceited sciolists to whom maturity brings no sense of reverence or self-distrust, and who soon attain to be the manufacturers of that shallow journalism which, in this country, is such a powerful agency in determining the public tone. We need further, and this grievously, more intellectual centralization: the few great cities do not pretend to exercise that influence which is their prerogative and their responsibility. Bœotia with us comes to the very gates of Athens. And while our economy, so assuredly settled on true and lasting foundations, makes the American Republic, in its simple grandeur, with the glory of its past history and its certain possession of present freedom to be the rational boast of us all, the truth is, that, so far as concerns immediate hope of political progress, the real question of the day, our future could scarcely be less bright. Starting, then, from assumptions such as these, what direction shall we take? Do, it is urged, just the opposite of that which was done by the late reform movement,— trust our servants, not insult them, and let us show our trust by assuring them their places for a long enough time to make it worth a capable man's while to enter the service, and give such hire as the

only laborers worthy of the State consider themselves entitled to ask. And let the absurdity be abandoned that in bidding for employees, the State, with its cheap offers, can ever get anything, excluding stray chances, but the refuse which the activities of private life have thrown aside. The deeper defects which come from the power of ignorant voters, to say one word upon this point, can be reached only by an intelligent system of proportional representation, by which combinations to reach given ends can be framed and made effective, and by which the contest between a majority and a powerful minority will take the form of the worthiness of the candidates for whom support is asked. What was done by the conventions we have seen ; and in bringing this paper to an end, it will probably be well to look at the movement as a whole, now that we take our leave of it. As has been said, its birthplace was the same as that of the "Granger" laws, and its promoters were men who had an inordinate belief, common among the half-educated, in the potency of legislation, and an ignorance, singular in its way, of the simple causes of the evils which they found to prevail in their communities.

The Illinois Constitution of 1870 is of the same category as the "Potter" Law, and the influence which it had over the Constitutional Convention of Pennsylvania is only accountable on the admission of a want of political culture in the older States which it is difficult to pardon. The new Constitution of Pennsylvania began where that of Illinois ended, is no more effective, much more pretentious, and to the same, if not to a greater degree perversive of the purposes of a constitution. And this consideration on sober reflection would, it is believed, have ordained a different fate for it; but at six weeks' notice it was voted upon by the people, who through various means had been excited to a pitch of enthusiasm clearly unreasoning. The Democratic party voted solidly for it, because it abolished a law by which, in Philadelphia, a registration of votes was required, and under which the Republican "Ring" manipulated all the elections. A considerable and highly respectable body of Municipal Reformers in Philadelphia worked hard for it, because it abolished the fee system; both these parties thus using a Constitution as the means of getting legislation

denied them by the proper Legislature. And finally the Republicans voted for it, by way of disavowing the "Philadelphia" Ring, and, like the Tories who applauded at the first representation of *Cato*, were determined not to be behind their adversaries in virtuous demonstration. The chief reason, however, of the large vote which was given for this instrument was that the Convention believed in its own work, and, as the men who composed it were generally influential, they found it easy to persuade the public to do so too. The governor of Pennsylvania, under an act of assembly, appointed a commission to revise the work before the whole of it had gone into operation, and the result of their labors has been to correct a number of minor mistakes, defects, and inconsistencies. The commission unfortunately did not feel at liberty to do more. They suggested the abolition of the "cumulative" vote in the election of the directors of corporations, and pointed out the evil which must arise through the passage of general laws designed to meet special cases. The new Constitution of New York is a sensible, practical reform, keeping for most part within constitutional bounds, general in its character, and, above all, making no pretences to being a political panacea. It is such an instrument as a number of intelligent men, having known the workings of a State administration, might suggest from their own experience. Without professing to be radical, and going in most cases as far as would be wise in the present state of public sentiment, the student of government can accept it as safe and beneficial, if not progressive.

We are not, it must be remembered, without an accession of valuable knowledge from this movement of reform. We know in detail all the ultimate evil results of our system; we know that practical men on our present political basis with their best suggestions cannot put an end to them; and we know, what is best of all to know, that our people are in the main honest and anxious to have a good government. With that knowledge and learning from our recent mistakes, it is not Quixotic to look forward to a new attempt at purification which shall reach its ends.

HENRY REED.

II.—GEOGRAPHICAL AND GEOLOGICAL SURVEYS.

I. GEOGRAPHICAL.

THERE was perhaps never a time when so much general interest was felt in geographical work as at the present. Geography is decidedly the fashionable science ; that is to say, not exactly geography, but geographical exploration, or, in other words, the investigation of the yet unknown portions of the earth. All the European nations are vying with each other as to which shall be the lucky country to secure the honor of being the first to solve some one of the few great geographical problems which yet remain to be worked out. England soon starts her expedition to the farthest North, roused to action in this direction, after many years of waiting, by the successes of the Americans, the Swedes, and the Austrians. The Germans themselves are attacking the one great question which Africa has yet to offer, namely, the tracing of the mighty Congo River to its source ; while an Englishman is also struggling — unless he has already succumbed to some one of the many dangers of African exploration — to follow the connection of the lakes about which Livingstone's last work was done, and which he believed to be the head of the Nile, but which are now known, almost to a certainty, to belong to the hydrographical basin of the Congo.

Geographical societies and journals were never more numerous in Europe, or more fully patronized, than they now are ; geographical papers find their way into the quarterlies and monthly literary magazines ; and the sale of photographs of scenery is rapidly increasing, and tending powerfully to develop an interest in all peculiar features of the earth's surface, and thus leading to the study of comparative geography. All along the base of the great European chain of mountains, the Alps, and on both sides of it, clubs have been formed for the purpose of uniting the means and energies of the many in the work of exploring the unvisited portions of the range, and of thoroughly working out the details of that which is as yet only partially known. These clubs number their members by the

hundreds, and their published volumes already form a goodly series.

But while all this and much more of the same kind is being done, indicating a lively interest on the part of the general public in those explorations which have, as the result to be attained, some brilliant discovery, or the settlement of some long-discussed problem, there is, at the same time, another class of geographical work always in progress and on a vastly greater scale and of vastly greater importance than that of mere exploration, but in regard to which the general public knows almost nothing, and to which the popular magazines hardly ever allude. We refer, of course, to the great topographical surveys which are being carried on in every civilized country in the world, almost without exception, and which have for their object the preparation of topographical maps of the regions surveyed. Such maps have as their essential features absolute accuracy and minuteness of detail; and in this respect they contrast strongly with the work of preliminary exploration, or of reconnoissance, as this sort of surveying is commonly called. By the work of a preliminary reconnaissance, the character of the dominant physical features of a previously unknown region is ascertained, a laudable curiosity satisfied, and the nature of certain great commercial problems indicated. The topographical survey, on the other hand, presupposes a country already settled, and having made considerable progress in civilization, art, and commerce, so that land has acquired a high value, thus rendering accuracy in the determination of its subdivisions a matter of pecuniary importance. The object of the writer of this paper is, to explain in a popular way, without the use of any more technical terms than are absolutely necessary, the difference between geographical exploration, or reconnoissances, and topographical surveys, and also to show what the latter are intended for, and what other civilized nations are doing in this line. It will then be interesting to inquire what the United States, either in their collective capacity or singly, have been able to accomplish towards a complete mapping of their own territory, and to give some hints as to what yet remains for us to do, that we may be put on a par with other countries with which we are much

in the habit of considering ourselves, if not a little superior, at least fully equal in point of general intellectual development. The recent discussion of this subject in the Legislature of the State of Massachusetts has very clearly brought out the fact that, in regard to the value and cost of a topographical survey, or, in other words, of a correct map, our law-makers and a good part of the general public are very much in the dark ; and it is hoped that a careful setting forth of some of the principal facts, by one who has had considerable experience in this sort of work, under United States and State authority, may be of interest, and perhaps useful when the subject is again brought up for discussion.

Let us first consider in what way the surface of the earth may be delineated, so that the result may be available for use. Almost every one, even the youngest school-boy, has some general idea of what a map is, and how by certain conventional signs it is the aim of the map-maker to place before the eye a miniature representation of some portion of the earth's surface, so that the relative position of its natural features, and of the artificial constructions or lines drawn upon it, may be taken in at a glance. These natural features are rivers, lakes, oceans, mountains ; the artificial constructions are streets, roads, buildings, railroads, canals, and the like ; the artificial lines which need to be indicated are the boundaries between States and towns, and other similar subdivisions of public and private property. That the above-mentioned features can easily be indicated on a map by lines, when their position has been carefully ascertained by instrumental measurements, is not difficult to understand ; but there is another important element which needs representation, but which can at best only be approximately shown, and in regard to the best method of doing which there is no clearly established opinion. This element is the vertical, or the relative elevation of different portions of the surface, which we know exactly whenever we can ascertain the precise height of every point above some fixed datum line, and which can also be approximately indicated by conventional symbols, as will shortly be explained. As this is an important question in topographical surveys, and one not well understood by the general public, some little detail in regard to it may be acceptable.

The most accurate and, in some respects, the most satisfactory way of representing the surface of any region is, to make a model of it ; that is, a copy, in relief, necessarily on a greatly diminished scale, by which all the natural features, including the vertical element, are represented. Such models are usually first worked out in clay, just as a statue is copied by a sculptor from a living model, and then cast in plaster ; or it may be carved in wood, or cut in cork, or made by piling sheets of cardboard cut into the proper shape upon each other. The data for such models must, of course, be obtained by measurements on the earth's surface, just as they would have to be if a map were to be made. These topographical models are particularly interesting and valuable when they include regions covered by lofty and precipitous mountains ; and such have been made for parts of Switzerland which are visited by great crowds of pleasure-travellers. One, in particular, at Geneva, is wonderful in its execution, and is studied with the greatest interest by thousands who have climbed or tarried with delight under the shadow of the "monarch of mountains." Such models, however, are not only extremely costly, but they are, as may well be imagined, very cumbrous and entirely unsuited for transportation ; neither can they be duplicated without great cost, unless limited to very small areas and made on a small scale. Hence they are rarely used, unless in peculiar and exceptional cases. Thus, for instance, in laying out a park for a large city, where the work is all to be done at once, and where the amount of money to be expended is very great in proportion to the area of ground used, and where the vertical element is of great importance, a model may often be of great assistance and indeed almost indispensable.

A photograph from a model gives, if taken with skill, under a suitable illumination, a wonderfully clear idea of the relief of the surface. One such, of the vicinity of Mont Blanc, done by a French artist, on a scale of 1 : 80,000, lies before us, and nothing can be more satisfactory than the way in which the form of the surface is brought out by it, so that the eye can appreciate, at a glance, the exact relative position and elevation of the different parts of that great mountain mass. There are obvious reasons, however, why such models and photographs

from models cannot come into general use. They are too expensive and not sufficiently portable,—portability being a very essential element in the use of geographical material. They are well adapted, however, for many purposes in teaching, and especially for conveying the first general idea of forms of surface to the young; they are also invaluable for illustrating geological structure in difficult and complicated regions.

Paper is the material on which the topography of a country is usually exhibited; and maps drawn upon paper, or else engraved or lithographed and then printed on that material, are in almost universal use. Hence a map means a representation on paper of some part of the earth's surface. It is easy to see that the first question to be asked in constructing a map is, What shall be its scale? or, What proportion shall it bear to nature? The school-boy's map of a hemisphere can hardly be more than a hundred-millionth of the natural size of the part of the earth which it covers, since it must show half the world on one small piece of paper; while the British Ordnance Survey map of the city of London is on a scale of one-thousandth, and occupies no less than 821 sheets. The former hardly does more than roughly indicate the boundaries of a continent, and of the principal states into which it is divided; while the latter exhibits the exact form and position of every building and division line of the land in the city. It will be easily understood that, in order that small objects may find room on which to be represented, a large scale must be adopted. It will also be not difficult to perceive that, in order to be able to prepare a map on a large scale, the preliminary topographical work must have been done with a proportionate degree of accuracy and minuteness of detail. The amount of time and money which has to be expended on a work of this kind is proportionate to the amount of information it is intended to exhibit, and that this expenditure should be proportional to the importance of the area to be surveyed, that is, to its wealth and the density of its population, seems evident; and this would lead us to infer that the mostly thickly settled and richest countries must have the most accurate maps. This, however, is not uniformly the case; the general intelligence of the people, or their rulers, their habits of thought, and their appreciation

of the practical use to which scientifically accurate work may be put, are also important factors, as will perhaps be discovered from what is said further on in these pages.

The determination of the scale to be adopted in any topographical survey means, then, the determination of the accuracy with which it is to be conducted, or the amount of detail to be put into the work. And it does not appear difficult to understand that, in a large country or state, it may be advisable to employ several different scales, or to proportion the accuracy of the survey to the importance of any separate division. A country like Belgium, of very small area, and with a population about equally distributed over its surface, would naturally be satisfied with much less variety of scale than would be advisable in Norway or Sweden, some portions of whose territory are very thinly inhabited. The same considerations would apply still more forcibly to our own country, great areas of which are almost worthless, or at best of no importance, except as having to be passed over in order to get in the shortest way from one part to another of our extended territory. It is true, however, that the same country usually requires maps on more than one scale, even if the survey is to be equally accurate over the whole area. For local details and for ordinary practical use, a map on a large scale is needed ; but this requires that the work shall occupy a great number of sheets, on each of which only a small area can be given ; so that, for general geographical purposes, where the eye needs to have before it at one time a considerable extent of territory, in order to obtain a connected idea of its physical features, it is necessary that a compilation on a reduced scale should be made, by which a considerable number of sheets are compressed within the limits of one. Thus in the Ordnance Survey of Great Britain, maps on both the six-inch and the one-inch scale are furnished, and are equally in demand.

Having determined the degree of accuracy with which the work shall be prosecuted and the scale or scales which shall be used, it is necessary to decide how the vertical element, already alluded to, shall be exhibited. And this is a matter of some difficulty, and one in regard to which there have been formerly considerable differences of opinion. We have seen

how an idea of the relief of the surface can be given by means of light and shade, in the case of the photographic copy of a model, which is wonderfully effective in conveying the idea of differences of elevation, the effect depending exclusively on the distribution of the light and shade caused by the obliquely falling rays of the sun ; were a photograph to be taken from such a model, with the rays descending vertically on it, the illusion or perception of the relief of the surface would be entirely lost. The same thing can be done, although less perfectly, by a skilful handling of the brush on paper, or by the lithographer on the stone with the crayon, giving a sort of bird's-eye view of the region to be mapped ; and, in the hands of a thoroughly artistic worker, with an eye for topography, much may be accomplished in this way. This method of indicating the relief of the surface is used now to some extent, especially in maps of regions covered by mountain ranges, where a considerable area is to be shown at once, and where, from the nature of the country, as well as from the necessarily small scale adopted, it is not expected that anything more than a general idea of the topography can be given. The map of the Thian-Schan range, recently published by Petermann, and that of California and Nevada, by the Geological Survey of the first-named State, are good instances of the application of this method.

But for an accurate topographical survey, where it is desired and expected that a close approximation to the vertical element shall be obtainable from the map, and not merely a picture conveying a general idea to the mind, other methods have to be adopted. An approach to accuracy is made by shading the hills by means of short, straight lines, or *hachures*, as they are generally called. Most of our ordinary geographical maps have the position and direction of the mountain ranges delineated on them by these hachures, which, as ordinarily used, are only a sort of conventional symbol, intended to indicate vaguely the existence of a hill or ridge, or series of ridges, and too frequently having a perverse resemblance to a cluster of caterpillars crawling over the surface of the map. The original idea of these lines is, that they indicate the course which a stream of water would take in running down the side of the range, in

the line of most direct descent, thus furnishing a clew to the direction of the slope. Many years ago a German topographer, named Lehmann, gave a more precise value to these hachure lines, by proportioning their thickness to the angle of slope of the surface they were intended to represent. Thus, by this system the steeper portions of the slopes appear on the map in darker shade than the less inclined surfaces, so that the relief is indicated something in the same way as if the hill-shading were done by the brush, in the manner indicated above, while the eye can determine from the thickness of the lines employed, although only approximately, the angle of the slopes. Many beautiful maps have been made, according to this system or some modification of it. Thus the Dufour map of Switzerland, as it is called, in which Lehmann's method, modified by the introduction of an oblique illumination, was used, is a masterpiece of the chartographic art.

Topographical maps were formerly made, in Europe, almost exclusively for the purposes of military defence, that is, to guide generals in arranging the movements of their armies; and it is only in later years that the civil uses of these surveys have become more prominent. Hence, as the demands of commerce, agriculture, and manufactures have begun to be heard more frequently and louder than those of war, more accurate work has been required, and the insufficiencies of the hachure method for details have become evident. The angle of a slope was the important element when the movement of artillery up or down it was the question to be decided; but the civil engineer, who has the more peaceful object in view of building a railroad or cutting a ditch, wants a section of the line he has to pass over, or, indeed, sections of many lines, that he may choose the one best adapted to his purpose; and he wishes to know the absolute height of each point in that section above the sea-level, or some other datum line, which may have been selected as the plane to which all the heights should be referred. This is done by means of contour lines drawn upon the map, so as to connect points having the same elevation above the datum line, and at greater or less vertical distance from each other, according to the amount of accuracy and detail which may be required. The steeper the slope the

nearer to each other the contours will fall, so that an increased steepness of the ranges will be indicated to the eye at once by the crowding together of the lines, thus reproducing, in a measure, the effect of the brush-shading spoken of above. This method may be understood more easily by those unaccustomed to maps made in this way by using a simple illustration. If we suppose in a lake a mountainous island, a thousand feet high at its highest point, to be sunk by ten successive stages of one hundred feet each, then at each stage of the sinking the water will meet the land and mark a line upon it connecting all the points which are respectively 100, 200, 300, and so on, feet above the original level of the lake. The lines thus marked by the rising edge of the water would be exactly in the places which contour lines accurately run at vertical distances of 100 feet would occupy. Any person looking at such contour lines would see at a glance what portions of the island were 100, 200, and so on, feet above the lake level; and if the slopes were pretty regular, he would be able to get a good idea of the relative heights of all the other points intermediate between those lines. The advantage of this system of contouring, as it is called, is, that from any map on which such contour lines are indicated a section can be drawn at once, which will more or less accurately reproduce the slopes and exhibit the elevation of all points on that section. And such sections are invaluable and, in fact, indispensable, in operations connected with the building of roads, railroads, ditches, canals, and engineering work of all kinds. The degree of accuracy with which such sections can be drawn depends on the distance apart of the contours. In cases of great importance, and over limited areas, they may be fixed at a distance of two or three feet apart vertically. In ordinary topographical surveys they may be drawn at distances of from twenty to a hundred feet or more, according to the nature of the country and the contemplated accuracy of the work.

A good topographical map of any region, therefore, will have indicated upon it all natural objects, such as lakes, rivers, and smaller water-courses; artificial ones, namely, boundaries of fields, enclosures, roads, houses, etc.; and, besides these, it will exhibit to the eye and furnish for use the vertical eleva-

tion at all points above the level of the sea, this being usually chosen as the datum line from which the altitudes are reckoned. And by "level of the sea" is usually meant mean low tide, or else the mean between mean low and mean high tide.

Thus far we have chiefly confined our remarks to the methods by which topographical information is brought into an available form, so as to be presented to the public on paper. And, indeed, many persons are so little acquainted with this kind of work, that they imagine the plotting of the survey and putting it into the form of a map to be the essential thing. This is the case indeed with most or all school-maps and with many others which are offered to the public, especially in this country ; they are simply compilations and workings over of other people's labors. But wherever an accurate map exists, there must have been done by somebody, and at somebody's expense, in the field, an amount of labor, and that of a kind demanding the highest degree of skill and immense patience, compared with which the mere plotting and engraving of the work is comparatively insignificant. Few persons, except those themselves professionally engaged in such surveys, have any idea of the amount of labor, and of course of time and money, required by a thoroughly accurate topographical survey, even if the area over which it extends be one of moderate dimensions. It may seem an easy matter to measure a line on the ground of half a dozen miles in length ; and so it is, if the region be level and it be a matter of no consequence whether the measurement be correct, provided it comes within a few inches of the truth. If a traveller wished to know the distance from one town to another, he would consider it quite a superfluous degree of accuracy that he should be informed to the nearest rod ; while in buying a piece of land in a large city a difference of half an inch in the width would be a matter of importance. Now, while most of the determinations of position from which the skeleton of a map is made are done by means of the measurements of angles and not of lines, there must be, to start with, a base measured somewhere on the surface, as a necessary preliminary to the triangulation, or the angular measurement of the net-work of triangles which covers the region to be

mapped, and which forms the frame, so to speak, into which all the details are to be fitted. This base line must, however, be measured with the utmost precision, even down to the smallest fraction of an inch ; for any error made at this preliminary stage of the work would be many times magnified as the work was extended from its original starting-point, and the value of the whole would be destroyed. It would be hardly possible to convey to the uninitiated an idea of the skill which has been bestowed on the construction of the instruments with which this base measuring is to be done, and of the patience and care with which they must be used. With the apparatus devised by Bache and Würdemann, and used on the United States Coast Survey work, distances are measured with such precision that the probable error in one mile is only about two hundredths of an inch. And to show the accuracy with which the work may be extended from a measured base by triangulation, it may be stated that a line 5.4 miles long on Chesapeake Bay was connected in the primary triangulation of the United States Coast Survey with a measured base of 8.7 miles on Long Island, the two being 208 miles distant from each other in a straight line. Yet the measured length of the base of verification on Chesapeake Bay agreed with its calculated length, as determined by computation of thirty-two connecting triangles, within four inches. Thus the same degree of accuracy is required in the angular as in the linear measurements, the instruments required for each of them being alike delicate and ingenious in their construction and requiring the most refined skill for their handling. As a general rule, the sides of the primary triangles should be made as long as possible ; that is, the two ends must be as far apart as vision aided by powerful telescopes can be extended. The object sighted at one end of the line is a beam of the sun thrown by a mirror directly into the axis of the telescope at the other end. By this beautiful contrivance the stations may be in some cases as much as a hundred miles distant from each other, while the average length of the sides of the primary triangles in the Ordnance Survey of Ireland is fully sixty miles. This preliminary work is called the main or primary triangulation, and the points fixed in position by it are determined with all the precision

that is possible by means of the most refined observations made with the largest and most perfect instruments that can be constructed. Further approaches to absolute accuracy are made by means of frequent repetitions of the observations, which are afterwards examined by the aid of mathematical analysis, so that every possible source of hidden error may be detected. It is to the points thus determined by means of the primary triangulation that the rest of the work is connected and referred ; a less degree of accuracy being required for the secondary and tertiary triangulations, because these can always be checked by means of the primary stations. This more detailed work is simply a dividing up of the large triangles into smaller ones, each step in the operation having as its object the fixing of the position of more points ; and this is carried on until the whole surface of the country has been cut up into triangles of suitable dimensions. In the British Ordnance Survey over districts where the scale of six inches to a mile is to be used, two points have been fixed by the triangulation on every square mile ; and where the scale is five feet to a mile, sixteen points have been determined on the same area. Into the framework thus elaborately prepared the minute details are fitted, and this is done of course by the aid of comparatively small instruments, the use of which requires much less skill than is needed when the larger ones have to be employed. The plane-table is almost exclusively used on the Continent of Europe for the detailed work ; and by means of this instrument the work is plotted on the field, and only needs to be inked in afterwards. By the aid of photolithography these plane-table sheets can easily be multiplied to any extent ; and it is one of the greatest advances recently made in topographical surveys, that the original work can thus be cheaply duplicated, and that all land-owners can have without delay copies, on the largest desired scale, of the original surveys of their own property.

Having thus explained as concisely as possible the nature of the operation of a topographical survey, it will be desirable to refer briefly to what is being done in Europe in the way of preparing accurate maps of the different states, before passing on to a review of our own needs. But space will not admit of

our doing anything more than merely to indicate, for a few of the most prominent countries, the scope of their topographical work; the simple catalogue of the great maps in process of publication in Europe, made as concise as possible, would occupy many pages of this Review.

Let us begin with Great Britain, which, including Ireland, has an area of nearly 111,000 square miles, and where the topographical survey has been going on since about 1784. The scientific work is partly performed by officers and privates of the Royal Engineer Corps,* and it is officially known as the "Ordnance Survey." Its total cost, from 1791 to the end of 1864, including the military pay of the men employed, was £ 2,991,624, and may be estimated to have been up to the present time about £ 4,200,000. The scales adopted are numerous, and in case of some cities are as large as five and even ten feet to the mile. The principal published maps, however, are on two scales, one of six inches, and the other of one inch to the mile ($1:10,560$ and $1:63,360$). Of England the map on the one-inch scale was begun in 1784 and finished in 1869; but the projection employed in it was defective, and it is in other respects not up to the present requirements of the country, hence it is now in process of working over and republication. Of the area surveyed on the six-inch scale, 24,877 square miles had been completed in England and Wales, and 27,829 in Scotland, up to the end of 1873. Ireland, on the same scale, was entirely finished in 1845, and all the sheets, 205 in number, published without, and about half with, the hill-shading. Besides the maps on the six-inch and one-inch scale, plans are furnished of any district as called for, on the scale of $1:2,500$ (about 25 inches to the mile), made by photzincography; but these are not necessarily engraved or published. The map of London is on a scale of $1:1,000$, and is comprised in 821 sheets. The various publications of the Ordnance Survey are sold in single sheets as wanted, at very moderate prices; but so great is their number, that the cost of a complete set, as far as already published, amounts to over £ 3,000. A great deal of work is prepared for the use of

* 382 military, including officers, and 1,446 civil assistants were on the Ordnance Survey staff in the year 1872.

the government on very large scales ; but it is chiefly the six-inch and one-inch maps which are of importance to the general public. At the present rate of progress it will require about ten years to complete the survey.

In Belgium the scale adopted is 1 : 20,000, the area of the country being about 10,000 square miles ; 450 sheets will be required, of which 137 were published up to the end of 1873 ; the contour lines are drawn at distances of one metre, every fifth one being indicated by a heavier line ; the sheets are lithographed and printed in colors, the rivers and lakes being in blue, the lettering and roads in black, the meadows and forests in different shades of green, the buildings in brick-red, and the gardens in carmine.

In Prussia, since 1849, new and more perfect methods have been introduced into the topographical surveys ; the plane-table sheets are now published on a scale of 1 : 25,000, and with contour lines at distances of 5, $12\frac{1}{2}$, or 25 feet, according to the nature of the country. The publication of the plane-table sheets was commenced in 1868, and in 1873 120 had been issued. There has also been, since 1841, a general map in process of publication, on a scale of 1 : 100,000, which will be comprised in some 400 sheets, of which nearly all are issued. These are engraved on copper and have the topography, or hill-shading, indicated according to Lehmann's system, as modified by General Müffling.

In Baden, the new map was commenced in 1874, on a scale of 1 : 25,000, and with contour lines at 10 metres' distance. The work is mainly a revision and correction of older surveys, and is expected to occupy six years, at a cost of about 80,000 florins.

In Saxony, the original survey was commenced in 1780 and completed in 1806 on a scale of 1 : 12,000, the area of the kingdom being 5,600 square miles. A topographical map was issued in the years 1837–1860, in 22 sheets and on a scale of 1 : 57,600. A new map was determined on in 1860, on a scale of 1 : 100,000, and it was completed in ten years ; there are two editions of this, one with the line-work only and the other with the hill-shading.

Having now shown what is doing in some of those European states which are, comparatively speaking, rich, densely inhab-

ited, and with moderate areas of territory, let us turn to the consideration of some countries which have only a thinly scattered population and a large area. Russia, for instance, with its enormous territory, just about twice the size of that of the United States, Alaska included, has been for many years actively engaged in prosecuting geographical surveys. The map of Russia in Europe, embracing about 2,100,000 square miles, has been under way since 1857, and will be embraced in about 700 sheets, of which 454 had been published in 1872. This is on a scale of 1:126,000. The military map of Poland is on the same scale, and is embraced in 57 sheets, all of which are published. Special maps of the Caucasus have also been completed; and, recently, a map of Central Asia. Norway has an area of 123,300 square miles, and a population about that of Massachusetts; that is, our own State is eighteen times more densely populated than Norway. But this comparatively poor country has set itself on having a good topographical map on a scale of 1:100,000, and which will occupy over 200 sheets. Those which have already appeared have been highly praised for their execution by competent judges; they are printed in chromolithography, like those of Belgium. Sweden also, very similar to Norway in respect to area and density of population, has her topographical maps on the same scale (1:100,000), and the work is already nearly half completed, the first sheet having been published in 1860.

We have thus given, necessarily in a very concise manner, some idea of the scope and methods of topographical surveys; and, before going on to consider what has been done in this country, it will be well to say a few words on the methods employed for mapping regions where, owing to the nature of circumstances, only imperfect work can be done, as in the first rough reconnoissance of an uncivilized region, or where the poverty and ignorance of the people have not yet allowed them to grasp the idea of a geographical map, and where consequently all such work has to be done for them by other nations. In parts of Central Asia the topographer must get what information he can, without the use of instruments, and not even exhibiting a note-book, but trusting almost exclusively to memory, or to a few hasty lines pencilled at moments when the

jealous vigilance of the natives might accidentally be relaxed. Most of our knowledge of the geography of Central Africa, such as it is, has been got almost without instrumental assistance. In such cases distances have to be guessed at, or roughly determined by keeping an account of the time employed on the march and estimating the pace of the animals ridden or driven. An odometer fastened to a wheel of the vehicle gives a still better approximation, when the ground is not too rough. Schweinfurth, the eminently successful African traveller, having lost his watch, with untiring patience counted his steps for six consecutive months, thus getting a quite respectable basis for a plotting of the region traversed. The direction is kept by means of the magnetic compass, and a great deal of valuable information has been obtained by these most simple means for determining the relative position of the various objects noted. The geographical traveller, however, usually has at his command the means of more or less accurately checking his daily sketches of the country, by means of astronomical observations. One element of geographical position, the latitude, is easily determined with portable instruments, for the use of which but little skill is required; but the fixing of the longitude, even if only to within a few miles of the truth, is a matter of considerable difficulty. To determine the longitude, so that the result may be depended on as being not more than two miles in error, requires a long series of observations made with skill, and with instruments which can hardly be called portable. But within the last few years the construction of numerous lines of the magnetic telegraph, some of which run through quite uninhabited regions, as, for instance, the one traversing Australia from north to south, has made the accurate determination of longitude comparatively easy in many places where before it was almost impossible, and has thus rendered great services to geography. The chronometer, which does such excellent service at sea, is of very little use to the traveller by land, except for rough work, since the inevitable jolting consequent on moving about in wagons or on horseback is fatal to the accuracy of its going.

With these preliminary remarks, which, it is hoped, will make that which follows intelligible to the general reader, we pass to the consideration of the progress in geographical work

in our own country. And, first, we have to call to mind the extent of our territory and its very diversified character; and, with but slight consideration, it will be evident that different portions of our vast area are very differently situated as regards their chartographic necessities. Without taking Alaska into consideration, we have, roughly speaking, three millions of square miles of territory, embracing almost every conceivable variety of soil and climate, and including the grandest expanse of fertile plain and the roughest and most inaccessible ranges of granite pinnacles. Valleys meandering among low forest-clad ridges, and offering every inducement for settlement and cultivation, are present in one part of our country; while, in another, we have precipitous cañons, cut through the solid rock to the depth of thousands of feet, and from the edges of which one may have in full sight an abundance of wholesome water, and yet die of thirst, from the sheer impossibility of climbing down the almost vertical walls by which the stream of life-giving fluid is hemmed in. The Atlantic Slope, the Appalachian Ranges, the Mississippi Valley, the Plains, the Great Basin, the Pacific Slope,—these all have their peculiarities of soil and climate, and are suited to invite settlement in very different degrees; so that, while portions of our territory are already densely populated, others are uninhabited, unless by a few half-starved, wandering Indians, and will always remain so. It is evident, therefore, that no one system of topographical work would be applicable equally to all parts of the country; but that a judicious discrimination will have to be exercised in selecting scale and methods best adapted to the varying wants of each particular section. It must also be remembered that, in the conflict between State and United States authority, different parts of the country are very differently situated as regards their rights and duties in this very matter of topographical surveys, as will be explained more fully when speaking of the United States Land Surveys. No one can doubt that Congress, if it saw fit, could organize and cause to be conducted to completion a topographical, or a combined topographical and geological, survey of the whole area of our country; but this has not been done, nor is there reason to suppose that it will be. Something has been accomplished,

however, and that must now be examined. And we will speak first of the preliminary reconnoissances and surveys which have been undertaken, mostly by the authority of Congress, and in the region west of the Mississippi, because nothing of this sort has been done, or needed to be, in the Atlantic States, or in the region east of that river, where the "Land Office Surveys," to be noticed further on, have long been established.

Twenty-five or thirty years ago the western half of the North American continent, north of Mexico, with the exception of its coast line, roughly laid down by the old Spanish and English navigators, was known to geographers only in the vaguest possible way. The courses of the principal streams—the Missouri, the Columbia, and the Colorado—had been approximately mapped, it is true; but the details of the interior were not much better known than is the centre of Africa at the present day. Up to the time of the acquirement of California from the Mexicans by the United States, progress in the exploration of this vast region had been extremely slow. Our government had little idea how soon the Pacific side of the continent was to become an important part of our Republic. From time to time, since the beginning of the present century, small expeditions had been sent out to explore its trackless wastes; the daring and restless fur-traders had wandered vaguely over regions which it seems incredible that they should have had the audacity to reach; and, from their rough notes and unskilled observations, maps had been put together in which the outlines of the physical structure of the country began dimly to appear. As late as 1826, however, our maps represented a narrow chain of mountains as traversing our whole territory from north to south, in longitude 105° to 110° , and dividing the waters flowing into the Atlantic from those tributary to the Pacific. Besides the Columbia and the Colorado, three other great rivers were indicated as heading in the Rocky Mountains, and running directly west to the Pacific. These were called the Buenaventura, the Timpanogos, and the Los Mongos. Thus the existence of the most striking feature of our western geography—the Great Basin—was entirely unsuspected at that time.

The memorable expedition of Captains Lewis and Clarke,

in 1804 to 1806,—the first important one ordered by our government,—had made known the position of the Upper Missouri and the Columbia; and the excursions of the Spanish-Mexicans, from the southwest, had furnished us with the materials for indicating the course of the Colorado with some approach to accuracy; but all the region between this river and the Columbia, comprising an area of about half a million of square miles, was vague and indefinite. Even Lewis and Clarke, who were generally extremely careful and accurate in their work, considering the means at their command and the circumstances of the party, were deceived by the size of the Willamette at its mouth, and represented it on their map as heading far to the east in Salt Lake; while, in reality, its course is really parallel with the Pacific coast, and at but little distance from it.

Major Pike was the first American explorer who reached the sources of the Colorado, and the second who crossed the divide between the Atlantic and the Pacific Oceans. This was in the years 1805—1807, just after the return of Lewis and Clarke. In this expedition — made to explore the sources of the Arkansas — Pike struck a large stream, which he supposed at first to be the Red River, and afterwards the Yellowstone (so vague was the knowledge of our geography at that time), but which is now known to have been the source of Grand River, the southernmost of the two great branches which unite to form the Colorado.

Humboldt's map, accompanying his great work on New Spain, was compiled and published soon after the explorations of Lewis and Clarke and Pike had been completed, and contained all that had been ascertained by the Spanish-Mexican explorers about the territory now included within our domain as far north as latitude 42°. This map was less in error, in some important particulars, than many others published years later, for it did not show any rivers heading in the Rocky Mountains and running due west to the Pacific. Great Salt Lake had been indistinctly recognized at that time; and a body of water with that name, the limits of which were not defined, is given on Humboldt's map; while the existence of another large one farther north, and called Timpanogos, is

indicated as doubtful : this latter one was laid down on much later maps, as being the head of the Los Mongos River. The name Los Mongos has disappeared from our maps, but that of Timpanogos * still exists, and is given to a small stream running into Utah Lake.

Major Pike was the discoverer of a prominent mountain, called by his name, at the base of which he camped, and for which he seems to have entertained an almost superstitious reverence. He says that "it is so remarkable a mountain as to be known to all the savage nations for hundreds of miles around"; and he did not attempt to climb it, for "no human being could have ascended to its pinnacle." Its elevation he estimated at 18,851 feet. This mountain for some time gave the name to what is now the State of Colorado ; and when the discovery of gold began to draw a crowd of emigrants in that direction, they were universally known throughout the West as "Pike's-Peakers." The elevation of this point is now known to be a little over 14,000 feet, and a United States Signal-Service station has been established on its summit.

The expedition of Major Long, in 1819, 1820, to the head of the Platte, was the first one sent out by our government, equipped in anything like a respectable manner, and provided with scientific observers and naturalists, charged with the investigation of the geology and botany of the region traversed. One of the high peaks of the Rocky Mountains, and the only one visible from the line of the Pacific Railroad, bears the honored name of Long. The same officer afterwards made the first exploration of the Minnesota or St. Peter's River. The sources of the Mississippi were roughly mapped by Lieutenant Allen in 1832.

Up to this time we were still without any definite knowledge of the region between the Colorado and the Columbia. The existence there of a large salt lake was vaguely known, and had been for a hundred and fifty years, much that was mythical being connected with it by various geographers. There is little doubt that it had been seen and navigated by American fur-hunters as early as 1824 ; but they never thought or cared to publish to the world the facts they had observed. Captain

* "Timpan" is the Shoshone word for rock.

Bonneville, of the United States Army, was the first educated man to visit this remarkable interior lake, and to ascertain and make known that there was a vast region, between the Rocky Mountains and the Pacific coast, of which the waters had no drainage to the sea.

Bonneville's expedition was not under the patronage of the government ; he obtained, however, leave of absence from the army as well as leave to pay his own expenses, and to furnish himself with instruments ; and, because he stayed away somewhat longer than was expected, he was dismissed the service. Indeed, Bonneville seems to have been a man very ill-used by fate ; for his work was forgotten or ignored by subsequent explorers, notably by Fremont ; the names he gave to the prominent features of the country which he discovered were never adopted, and not even the influence of Washington Irving was sufficient to make the intrepid explorer's name stick to the lake he was really the first to make known to the world. He never even got so far as to be a candidate for the Presidency ; neither was he called the "Path-Finder" ; that name he must have dropped somewhere on his route, for the one who followed him picked it up.

Bonneville went entirely around the Great Basin, going out by the Valley of the Humboldt, which he called Mary's River, and returning by the old Santa Fe trail, which was the one used by the native Californians in travelling from the southern Spanish settlements on the Pacific coast to Santa Fe. His narrative, edited by Irving, was published in Philadelphia in 1837, in two volumes, with two maps. It does not appear, from anything that Fremont published, that this work had ever come under his notice.

Nicollet, a Savoyard, who came to this country about 1831, and who was a skilful practical astronomer, did a good amount of valuable geographical work in the years 1836–1843, first on his own private responsibility, and afterwards in the employ of the government, and chiefly about the sources of the Mississippi. The region he explored, and was the first to map approximately, has since been surveyed by the United States Land Office and has become the flourishing State of Minnesota ; but the value of Nicollet's service, as one of the pioneer geog-

rappers of the country, cannot be forgotten. He was the first explorer in this country who used the barometer with skill for the determination of elevations in the interior, and it was as his assistant that Fremont learned the use of portable astronomical instruments.

We have now mentioned all the most important reconnoisances and explorations, having for their object the development of the geography of the Far West, previous to those of Fremont. With this energetic and intrepid, if not always judicious, explorer, may be said to have commenced the first systematic investigation of the geography of the region west of the Rocky Mountains. Thanks chiefly to the influence of his father-in-law, Colonel Benton, Fremont, whose explorations began in 1842, was well fitted out by the government both as to men and instruments, and he had a great advantage over all previous workers in that field, in that he was accompanied by a skilful assistant, Charles Preuss, so that he could devote himself to the astronomical observations, while Preuss attended to the delineation of the topographical features of the country,—a kind of work in which he was highly proficient. Fremont made several expeditions across the mountains, in the fourth and last one of which the party suffered terribly, having been overtaken by winter snow-storms, so that, as is universally believed in California, they were driven to actual cannibalism.

It is only the three first expeditions which are important, or of which any account has been published. The first was in 1842, up the Platte to the Sweetwater, then to the Wind River range, and back down the North Platte. The reports of this and the next expedition — that of 1843 and 1844 — were issued together, and have been much more widely circulated and read than any other geographical documents of the kind ever published in this country. This second expedition, in which Fremont supposed that he had discovered the "Great Basin," in which, as we have seen, he was anticipated by Bonneville, was really a grand triumph over every kind of obstacle; it was, however, less remarkable than that of his predecessor; since, while the one was accompanied by a large and well-armed party, provided even with artillery, the other was only one of a small band of volunteer explorers, more than half of whom were

swept off in one battle with the Indians. Fremont's party started from Kansas in May, 1843, on the second expedition across the mountains. They followed up one of the branches of the Platte, through the Black Hills, up the Sweetwater, to South Pass,—then generally supposed to be the proper line for a railroad across the continent,—thence by a circuitous route to the Boise River and the Columbia; thence on the east side of the Cascade Range, by Pyramid and Mud Lakes, down the eastern edge of the Sierra Nevada, which was crossed in midwinter after much suffering and many dangers. At the great ranch of Sutter, one of the survivors of the Swiss guard of Charles X., who had settled near the junction of the American River with the Sacramento, Fremont was hospitably received; and, after recruiting his party, he started on the return trip, going south to the head of the Tulare Valley, and then recrossing the Sierra, and back through the southern portion of the Great Basin to the Parks of the Rocky Mountains, and down the Arkansas to the starting-point, which he reached after fourteen months of almost continuous journeying.

Of the next expedition, in 1845–46, the results have never been published; but in 1848 a map was issued, accompanied by a pamphlet entitled “A Geographical Memoir upon Upper California.” This map was the first representation of our Western territory which made anything more than a distant approach to correctness. It gave at least a tolerable general idea of the most striking geographical features of the region: the Parks, the Sierra Nevada, the Great Basin, with its nearly parallel north and south ranges; the great Lava Plain of Oregon; the dry plateaux of Southern Utah and California: these were all indicated with more or less clearness.

And now, just at the close of Fremont's career as an explorer, came an event which had a lasting influence in a variety of directions, and among others in that of the geography of the West. The Californian gold excitement, and the consequent rush of emigration across the plains to the Pacific shore, seemed all at once to bring that region close to us which had been before so distant and little cared for. The establishment of a line of steamers by way of the Isthmus of Panama to California led to the building of a railroad to con-

nect the two oceans at a convenient point. Soon communication by rail through the heart of the continent began to be talked about, but at first as something only possible perhaps in a distant future. The matter was more and more discussed, and then Congress was appealed to, and it was urged that a survey should be ordered for the purpose of ascertaining the most feasible route. Appropriations were made for this purpose, and several surveying parties organized under the direction of the Secretary of War, officers of the United States Engineer Corps being placed in command of them. The work was continued from 1852 to 1857; and in addition to the reconnoissances made with a special view to railroad routes, there was considerable topographical material collected, and quite a number of naturalists were also employed in investigating the geology of the region traversed, and in making collections in all departments of natural history. The routes explored were near the forty-ninth, forty-seventh, forty-first, thirty-eighth, thirty-fifth, and thirty-second parallels. The work was hastily, and some of it carelessly, done, most of the persons employed having had little or no experience in topographical or geological surveys; but, on the whole, the results formed a large addition to our previous stock of knowledge; and the collections, especially, were of great value as giving the material for making out a pretty full account of the distribution of animals and plants over the vast area traversed by the exploring parties. Thirteen ponderous quartos were issued within two or three years after the field work had been completed, and are familiar to all — as to their exterior, at least — as the "Report of the United States Pacific Railroad Surveys." Maps were made by each party of the region embraced within the area of its explorations; and from them, and all other available sources of information, a general map was compiled under the direction of Lieutenant (now General) Warren. This map has been so much altered and worked over at the United States Engineer Bureau, since its first appearance in 1857, that it has but little now remaining on it of the original material. Its scale is about forty-seven miles to an inch, and it was compiled and drawn with great care and skill by Mr. Freyhold, much difficulty having been found in reconciling the

erroneous and conflicting determinations of longitude, as is fully set forth in the elaborate and valuable memoir by General Warren which accompanied the map in question. Indeed, it was especially with regard to longitudes that the United States Pacific Railroad surveys were deficient, there being but few good instruments taken into the field, and fewer still of good observers who went with them. A delay of a few months in beginning the work, supposing the interval to have been devoted to preparing suitable instruments and training observers in their use, would have added greatly to the value of the results. As it happened, curiously enough, not one foot of the ground explored by these parties for a transcontinental railroad is passed over by the line as it has actually been built, excepting the valley of the Humboldt River, which was part of the regular emigration route at that time, and almost an unavoidable link between the Atlantic and Pacific.

The Mexican and Northwestern boundary surveys have accurately fixed the lines which separate us from British territory on the north and Mexican on the south. The former was completed in 1856, and the latter much more recently. The results were of little value from a geographical point of view, since the topography was worked up only in the immediate vicinity of the lines surveyed. A Report on the Mexican Boundary Survey was published by our government, in two volumes, and illustrated without regard to expense, the most valuable portion of it being that relating to the botany of the region adjacent to the line. No full report has ever been issued with regard to the running of the Northwestern boundary, nor have any of the maps been published. The line has been established and marked, and left to time and the Indians to take care of. So with other government surveys of lines dividing the individual States. They have not been creditable to the country, either in the methods or accuracy of the work; neither have they added much to our knowledge of the geography of the country, and rarely has anything been published in regard to their results. The work done on the line between California and Nevada is one of the worst instances of this putting of costly and important undertakings in the hands of incompetent men.

The expedition of Lieutenant Ives up the Colorado River, made in 1857, 1858, developed interesting facts in regard to the physical geography and geology of that very remarkable region; but the chartographic portion is very defective, the work having been of the most sketchy description.

At the time of the commencement of the War of the Rebellion, there were several reports of geographical explorations in the possession of our government, whose publication was delayed by the troublous condition of the times, and which appear now to be buried in the archives of the departments at Washington, and destined never to see the light. One of these reports was an important one; it related to an expedition under the direction of Colonel Macomb, having for its object the exploration of the San Juan River, one of the principal affluents of the Colorado on the south side. Another was that of General Warren's reconnoissance, in 1855-1857, in Nebraska and Dakota; and still another contained an account of the reconnaissance of the head-waters of the Missouri and the Yellowstone under Captain Raynolds, in 1859, 1860. The geographical results furnished by these various expeditions, and by many other less important ones, made under government auspices, have gone to the United States Engineer Bureau, and have been utilized in working over Warren's map of the United States. They were all reconnoissances, and almost without exception too defective in the astronomical determination of position to allow of their being used, except for a general map on a very small scale, where detail was not necessary, and where discrepancies of a few miles could be easily put out of sight.

Up to 1860, the United States had been entirely unsupported by the individual States and Territories in the work of adding to our stock of geographical knowledge of the Far West. The Land Office Surveys — of which more presently — had made some progress in California and Oregon; but hardly a beginning elsewhere to the west of the Rocky Mountains. These two were, indeed, the only organized States west of the 104th meridian, and they together hardly contained half a million of inhabitants; but little was therefore to be expected from this quarter, unless done by the central government. At this time

there was a good general knowledge of the geographical outlines of a large part of the region west of the Mississippi; only the southern and western portions of what is now the State of Nevada and a part of Utah were still marked on our maps "unknown." No detailed work, however, had been done in all this vast region, and the structure — both geographical and geological — of the mountain ranges was something which had not received the slightest attention. Even the elevations of the prominent mountains were unknown; not a single high peak, in all that vast complex of ranges which we call the Cordilleras, had ever been measured. There was also the chronic difficulty with regard to longitudes. Not a single point between the Mississippi and the Pacific coast had been accurately enough determined to justify its being used with confidence for subordinating other work to it. Salt Lake itself, which ought to have had the best established position in the region, since it had been made the special object of a costly expedition, was found by the telegraphic observations of the United States Coast Survey, in 1869, to be six miles east of the position which had been assigned to it by Warren.

In 1860, the State of California made a beginning in the direction of accurate work, by the establishment of a geological survey. Among the provisions of the Act, by which the work was authorized, was one requiring the preparation of "suitable maps," and this was construed by the State Geologist to mean maps as accurate as could be made with the means at his command. In the ten years during which this work was carried on, considerable progress was made in developing the detailed structure of both the Coast Ranges and the Sierra Nevada, and several maps were published, on scales of two and six miles; and also a general one of both California and Nevada, on the scale of eighteen miles to the inch. An important work in four sheets, giving the topography of the whole Sierra Nevada, on the scale of 1 : 380,160, was nearly completed, and three sheets had been engraved in a style worthy of high praise, when the work was suddenly stopped by the Legislature in 1874, although the entire expenses of the survey in all departments, including geological and natural-history work as well as the costs of publication,

had been considerably less than \$20,000 per year from the beginning.

The explorations of the Central Pacific Railroad, for establishing their line, gave the first clear idea of the topography of the region between Salt Lake and the Sierra Nevada, along the thirty-ninth and fortieth parallels,—a region traversed by more than twenty nearly parallel ranges of mountains, many of which are little inferior in height and elevation to the Pyrenees. Several lines were surveyed through Nevada, in the hope that a feasible route might be found across these ranges, and that thus the road might be run direct to Salt Lake City, without the long detour to the north, by way of the valley of the Humboldt, by following which they would be obliged to leave what were then the most important mining districts of the Great Basin far to the south. By combining these surveys, which were executed by Butler Ives, a skilful topographer, a quite accurate map of the northern portion of the Great Basin was obtained; which, however, was never published. This map covered almost precisely the same ground as the western half of the Fortieth-Parallel Survey, of which more presently. The Union Pacific Railroad made no surveys having any topographical value; but those of the South Pacific added some few items of importance to what was previously known of the region at the base of the Rocky Mountains in Colorado and New Mexico. The Northern Pacific, on the other hand, contented itself with compiling, from Warren's map and other authorities, a large and geographically worthless diagram, which was widely circulated, with the proposed route of the road indicated on it, and the sterile deserts of the Northwest as far north as latitude 52° marked in large capitals, "The Continental Wheat Garden!"

The "United States Fortieth-Parallel Survey" and the "United States Geographical and Geological Survey of the Territories" will be noticed further on, when we come to speak of work now in progress. At present, we have to turn our attention to what has been done in the States east of the Mississippi, and in the inhabited portions of the great valley of that river, towards working up the geography of the eastern half of our territory. And it may, in the first place, be

stated, that for the valley of the Mississippi we have to depend chiefly on the United States Land Surveys, while for the Atlantic States the basis of our geographical knowledge is the United States Coast Survey, supplemented by a large amount of material of a very mixed nature, and not at all thorough in execution or trustworthy in detail. To appreciate the chartographic condition of this portion of the country, it will be necessary, first, to give some idea of the operations of our Coast Survey.

The United States Coast Survey is a work of such magnitude, so important to the geography of the country, and, withal, so creditable to American science, that it will be proper to take some pains to make ourselves acquainted, in a general way, with its methods and progress. It is the only great scientific work in this country which has been uninterruptedly carried on for any considerable time; and one of the few things done under the authority of the national government in which every American citizen can take pride. The importance of an accurate knowledge of the coast line of a commercial country like our own was something that the dullest and least scientific mind could hardly fail to perceive, and it is not surprising that such a survey was ordered; but it is, indeed, something to be wondered at, that a work, requiring such an amount of time and so large an expenditure of money, in order that it might be executed in a creditable manner, should have got itself fairly established as a national institution. Having been started, it was rather to be expected that it would be put in charge of some one who would contract to have it done within the shortest possible limit of time, and who would have had but one idea,—that of pocketing the largest amount of profit at the end of the operation. Indeed, it is rather a matter of luck than anything else that the Coast Survey became what it is, and, being what it is, has continued to exist. Such a work needed, as its head, a man, not only of extensive scientific acquirements, but at the same time of extraordinary executive capacity. Such a man might, perhaps, be found without great difficulty; but he must, in addition to the necessary scientific and executive ability, possess the art of managing politicians, and the personal, mag-

netic influence needed to carry, every year, a bill through Congress, sanctioning the expenditure of a large sum of money. Bache had all this, and, besides, a tenacity of purpose which no amount of opposition could overcome.

The Coast Survey, as first started, was placed, in 1807, under the direction of Hassler, a Swiss by birth, who had emigrated to this country in 1801. He was a man of high ability, and his ideas of scientific accuracy were far beyond the comprehension of the men of his day in his adopted country. He was, however, a very eccentric individual, quite wanting in tact and executive ability. He had the fixed idea that he was the only person in the country who knew anything about geodetic work ; and he was probably very nearly right, at the time the work commenced, although great progress, in that respect, had been made before his death, which took place in 1843. But for sixteen years of the time since the survey was commenced, the work had been suspended, owing to the financial troubles following our second war with England.

In 1844, Bache was appointed superintendent of the Coast Survey, and he continued actively engaged in the duties of that position until 1864, when, overwhelmed by the load of care and responsibility which this survey, and many other scientific labors incident to the War of the Rebellion, laid upon him, his health gave way, and he was obliged to leave the country, in the hope that repose and freedom from care would restore the powers of the disorganized brain. But the relief came too late ; he lingered on, retaining the nominal superintendency until 1867, when his troubled spirit found eternal rest.

At the time of Hassler's death, the Coast Survey was in progress between Rhode Island and Chesapeake Bay, a single base from which to start the work having been measured on the south shore of Long Island. Five large charts had been engraved, but nothing published. Bache at once recommended the adoption of a more comprehensive system, and succeeded in obtaining the approval of Congress and the necessary funds. According to this system, the coast was divided into several distinct sections, as nearly of the same extent as convenient, and work was commenced and carried on simultaneously in each of them independently of the others. There are eleven

such sections in all, each, as a rule, with its own base line. Of the accuracy with which these bases have been measured, we have already spoken in the preceding pages. By the aid of the triangulation carried along the coast, in accordance with the principles already indicated, the shore line has been laid down with accuracy, and the minute details of the topography given for a distance of from one to three miles inland, according to the nature of the locality. This fixing of the exact position of the line of the coast forms the basis of the hydrographical work, which is the part of the survey of the most importance to the mariner and to commerce, but with which we have not to occupy ourselves in this connection. It is with the work of the Coast Survey, as forming the basis of the chartography of the interior of the Atlantic States, that we have to do at present.

As the net-work of primary triangles extends, owing to the great length of their sides, far back from the coast, a considerable number of interior points are thus fixed accurately in position, and the work of the Coast Survey thus affords a basis for a convenient extension. Favored by the remarkably indented character of parts of our shore line, some States, like New Jersey and Maryland, have really had no inconsiderable portion of their topography thus accurately given them at the expense of the United States.

A few years ago a beginning was made towards extending the triangulation of the Coast Survey farther into the interior than was needed for strictly coast work, with the idea of thus preparing the way for making the survey a national one, and doing away with its limitation to the shore line. The first reference to anything of this kind we find in the Report for 1870, in which the superintendent states that a new item is introduced into the estimates, "small in amount, but of inestimable importance to the scientific accomplishment of the survey." The item in question is, "for extending the triangulation of the Coast Survey, so as to form a geodetic connection between the Atlantic and Pacific coasts of the United States." The amount asked, which was granted by Congress, was only the almost insignificant one, as compared with the total demanded for the work, of \$15,000; the whole amount

called for to continue the survey being \$746,000, while \$643,000 was the sum actually voted by Congress for the previous fiscal year. In the Report of the succeeding year, 1871, we find that this estimate was increased to double the sum previously asked for, namely, to \$30,000, and the proviso added, "that the triangulation shall determine points in each State in the Union which shall make requisite provision for its own geological surveys." In the same Report, information is given in regard to work done during the year in this department of the survey, and it is stated that a "few geographical positions had been determined in the vicinity of St. Louis, and others in the States of Ohio, Illinois, and Kentucky." Further on in the same Report, mention is made of the determination of geodetic points in New Hampshire, the triangulation being extended from the coast across the State, in the direction of Lake Champlain. A similar beginning was also made in the vicinity of St. Louis. For the year 1872-73, the amount appropriated by Congress for this interior geodetic work was \$36,000, and the same for the next year; for 1874-75, and 1875-76, the appropriation has been increased to \$50,000. What has been accomplished up to the present time, as we learn from the Superintendent of the Coast Survey, is as follows: *reconnoissances preliminary to triangulation*, from the Blue Ridge in Virginia to the Ohio River; through Southern Pennsylvania, and in the same latitude in Missouri; near Salt Lake, for a base-line site and for points to extend triangulation east and west of that site: *triangulation commenced*, east and west of St. Louis; from San Francisco, to cross the Sierra Nevada to the meridian of Austin, Nevada, and from Monte Diablo up the Sacramento Valley to Mount Shasta. Geodetic work or preliminary reconnoissances have been or are in progress in sixteen States.

The highest geodetic problem of the Coast Survey, that of working up the observations with a view to contributing to our knowledge of the form and size of the earth, or, as it may be technically expressed, in the words of the superintendent, "finding the geometrical expression for a surface most nearly in accord with the results of astronomical and other observations, made in the progress of the primary triangulation," has received attention, we are informed; but nothing has as yet

been published in regard to it. Whether it will be possible for the Coast Survey to keep up the high standard maintained under Bache's superintendence, remains to be seen. It is fervently to be desired that there shall be no falling off in the execution of a work to which we have been in the habit of looking for important scientific results, which we can hardly expect to get in any other way than through its agency.

The survey of the Lakes, carried on by authority and under the direction of the Department of War, the Coast Survey being attached to the Department of the Treasury, appears to have done its work well so far as the hydrography of our great interior bodies of fresh water are concerned. The work has, however, no great topographical importance, and it ought, for a variety of reasons, to have been executed by the Coast Survey, which, in extending its primary triangulation so as to form a geodetic connection between the Atlantic and the Pacific, might easily have crossed the continent in such a way as to embrace the region of the Great Lakes.

If we have in the Coast Survey a work of which we have some right to be proud, the system of the United States Land Office Surveys, on the other hand, is a very disagreeable subject to handle, since it is marked by the most serious defects, both of plan and execution. Little is known of these matters by the inhabitants of the older States; but in the West the terms "township," "range," and "section" are familiar as household words.

The United States is the owner (nominally at least) of an immense area of land, which has to be surveyed after some fashion before it can be sold or even given away. The Mexican government tried the experiment of giving away land, without defining its boundaries by survey, in California, before that region became United States territory, and the consequence is, that many of the original grantees have been unable to maintain themselves against conflicting claimants, and have lost everything, while multitudes of lawyers have fattened on the spoils, and an amount of fraud has been perpetrated which fairly exceeds belief.

If one looks at an old map of our country, as it was before the Revolutionary War, it will be seen that the States are

divided off from each other on the Atlantic shore and for a little way into the interior, but without any defined boundary to the west. Some States had, as they supposed, claims through to the Pacific Ocean : others extended indefinitely back into the wilderness, so far that the western part was beyond the reach of anybody : that was enough. When Cambridge was laid out, a route for a road was surveyed back into the wilderness for a distance of six miles : that was about as far, they calculated, as civilization would be likely to extend. Of course, when things were so indefinite, there must eventually be a good many conflicting claims. Connecticut, for instance, could not be extended to the Pacific without crossing over New York : so at length, after much discussion, the different States, responding to the appeals of the Revolutionary Congress, New York taking the lead, surrendered their claims to the general government. The United States held no land in any of the original thirteen States, except what was bought for public uses. Vermont was claimed by New Hampshire and New York, but was admitted to the Union as an independent State in 1791. Maine, previously claimed and governed by Massachusetts, was admitted in 1820. Kentucky and Tennessee also came into the Union without giving up any of their lands to the United States : but all the rest of our domain east of the Mississippi, forming the Republic as it existed in 1783, belonged to the general government, and comprehended altogether about 350,000 square miles. By additions since made, namely, by treaty with England, purchase from France, helping ourselves to valuable land belonging to Mexico, and paying her afterwards for worthless, our territory was multiplied seven-fold in area, making seventeen times as much as Prussia had before she commenced the last war. — and not including our last doubtful purchase, Alaska. Not counting that trifling acquisition of 582,000 square miles, we have, or did have, of public land, 1,455,473,500 acres, as estimated, in 1860, at the General Land Office, much of it worthless, and yet including as fine a body of agricultural land as can be found in the world. Nearly all of Indiana, Ohio, and Illinois has already been sold or given away ; and, of course, a large quantity in

some of the other States has been disposed of, but a vast amount still remains on hand, although our public lands have been most liberally given away by Congress, under every sort of pretext. For instance, in 1874, of 4,629,312 acres disposed of, only 2,651,224 were actually sold; the rest was all got rid of in some way which certainly did not bring any immediate returns of cash into the treasury. It is worth while, then, to learn how this vast body of land is cut up, and its subdivisions so marked that the purchaser may know where the tract to which he has acquired a title is located. — or use a convenient American word, which first came into use in connection with the public land surveys, and which meant originally the selecting of some part of the public domain for a home. It is only after a description of the Land Office system of surveys, that one can form an idea of the geographical value of the work. The area over which these surveys have been extended includes, of course, only land belonging to the United States, as designated above. In the Mississippi Valley and along the borders of the Great Lakes, from Western New York nearly to the western limits of Kansas and Nebraska, the country has almost all been surveyed, and offered for sale or given to railroad and other companies; but further west there remains still a vast body of land into which the surveys have not been extended, partly for want of time, and partly because the land is not worth enough to make it reasonable to suppose that the amount expended on the work would ever be got back from its sale. Portions have therefore been selected here and there, and brought into market as required; but there are no large bodies of surveyed land west of the Rocky Mountains, except in the Willamette and San Joaquin and Sacramento valleys.

The object of the United States land surveys is to cut the land up into squares of one mile, which are called sections. This is done by means of the simplest and least accurate instruments, and such as require the least possible amount of skill for their use. The direction of the lines is given by the magnetic or surveyor's compass, and the distances measured with the chain. There is no triangulation or any similar accurate fixing of a net-work of connected points, by means

of which the accumulation of errors is held in check; but the general idea of the methods followed can be given in a few words. If we suppose a line accurately run from south towards the north, or in the opposite direction, all points on that line will have the same longitude. Such a line is run, theoretically, as the beginning of the survey of a certain district, which may embrace a part of a State, or portions of several adjacent ones. The line thus run is called a principal or guide meridian. At right angles to this another line is traced, and called the base line. From the two lines thus established other lines are run and measured with compass and chain, by which the ground is divided off into squares of six miles, called "townships," and these again into subdivisions of one mile square, called "sections," a section containing, "as near as may be," 640 acres. In the centre of each section line a post is set when the line is run, and this is called a "quarter-post," because it answers the purpose of indicating a division of the section into quarters of 160 acres each. By an ingenious system of notation, it is so contrived that any section of land may be easily designated by reference to the number of the meridian to which it belongs, and to its position east or west of that meridian and north or south of the base line. That this system is one very convenient for temporary use, in bringing the public lands into market with the greatest expedition and at the least possible cost, is not to be denied; but what will be the future consequences of the adopting of a method so inaccurate remains to be seen. We have only, at present, to busy ourselves with the geographical material furnished by these surveys. In the first place, the entire unavailability of the system for mountainous regions is to be noticed. The lines cannot be run with a compass and measured with a chain with even a rude approach to accuracy, except in a region which is, at least, moderately level. This is shown by the fact that the townships and sections, in the few cases where the work has been carried into the mountains, have proved, on examination, to be extremely irregular in shape; and it is a fact, that the surveys have been mainly confined to the level strips of land between the ranges, throughout the whole of the mountainous western portion of the country. The system

which answered tolerably for the flat or gently undulating plains of the Mississippi Valley, has been found quite unavailable for the Cordilleras. And, as no topography or hill-shading is given on the plotted sheets of these surveys, no idea of the physical structure of the regions they embrace can be obtained from them, or any map constructed by putting them together, except where the country is destitute of mountain ranges. Of course, as the lines are only run so as to divide the surface into squares of one mile each, all within those squares is a blank, except in so far as it may be deemed reasonable to fill them up by arbitrarily connecting the objects intersected on their borders.

In point of fact, the system of the Land Office Surveys is not only unsatisfactory in itself, but the work has been, much of it, very badly executed. We do not allude here to the defective and even fraudulent character of portions of the less important details, but to those prominent features, the principal meridians, by which the rest of the work is co-ordinated, and which have first to be laid down on the map, whenever Land Office material is to be used for geographical purposes. And it will, we think, excite some surprise after reading in a report of the Commissioner of the General Land Office, the head of this department of the government business, that the guide meridians and standard parallels are "*run, as nearly as human skill can effect it, upon true meridians and parallels of latitude,*"* to learn that, in truth, portions of these lines are miles away from where they ought to be, in order that the above statement in regard to the accuracy of the work should be true.† In order that the Land Office work may be utilized at all on any map of the United States which can lay claim to be accurate, the longitudes of all the principal meridians will have to be carefully determined at various points along their course by means of the telegraph. This could be easily done, for the meridians in the valley of the Mississippi, which pass, in good part at

* See Report of the Commissioner of the General Land Office for 1866, Part I. page 8.

† Those who desire to investigate this matter will find it discussed in a chapter of Foster and Whitney's Lake Superior Report, Part II., written by Charles Whittlesey, and also in Warren's Memoir, referred to above.

least, through a thickly inhabited region, intersected by railroads and telegraphs, and of all the geographical work needed at the present time in the country this is the most important. And should the Coast Survey succeed in extending its triangulation across the country, its officers ought to be required to connect their work with the Land Office Surveys, and to establish permanent monuments at suitable points, which should be most carefully protected by legislation, if it be possible in this country to bring about so desirable a result.*

When we come to inquire on what besides the Coast Survey we have depended for the chartography of the eastern Atlantic border, that is, what material has been used in the construction of the maps in common use of the various States from Maine to Georgia, the question is a difficult one to answer; and it becomes a still more perplexing task when we seek to learn what is the relative or absolute value of the material thus used. Chain and compass surveys, either of the towns, the counties, or the States, made for the purpose of fixing their respective boundaries, constitute the principal body of this material; and it has been so long accumulating, that it would be a most tedious and unsatisfactory matter to search out the history of these fragmentary undertakings. Indeed, this could only be done under the authority of the various States, and with diligent investigation of their archives. Discrepancies of several miles are believed, with good reason, to exist in the boundaries of some of the States; and the recent re-examination of the line between two of them—New York and New Jersey—has shown very clearly how full of errors the old compass surveys were, even when best done. The only States which have undertaken any systematic surveys, for the purpose of securing correct maps of their territory, are New Jersey, Pennsylvania, and Massachusetts, and in no one of these instances has the result been satisfactory. New

* There is something truly alarming in the thought that the lines of the United States Land Office Surveys can never be run over again, or their location re-established, after the marks by which the work is indicated on the surface have been obliterated. And these marks are only small wooden posts, mounds of earth, or "blazes" on trees, none of which can survive many years, while most of them disappear very quickly, unless some one has a special motive for their preservation.

Jersey made a very creditable beginning, having an excellent basis in the Coast Survey triangulation, which, from the peculiar form of this State, extends over no small portion of its area. The work, begun in 1854, was carried on for two or three years and then suspended, although a good deal of valuable material was collected which was afterwards utilized in the State geological map. A large amount of topographical work was done in Pennsylvania, in connection with the State Geological Survey, in the way of improving the map of that State ; but there was no accurate triangulation made, neither was the topographical map which was constructed ever laid before the public, although it was used to some extent in the geological atlas accompanying the final report by H. D. Rogers.

Massachusetts was, however, the first to institute what was intended as a topographical survey, but which really turned out to be only a triangulation, bearing the same relation to a finished survey that a skeleton does to the living body. It will be worth while to look a little more closely into this matter, and to set forth the errors into which the Legislature fell from entire ignorance of the subject. This ignorance was, perhaps, not so blameworthy forty-five years ago, but it would be inexcusable for the State to enter on another work of this kind, without more knowledge of what is needed, and of how such a survey should be executed, than existed in this community when the former survey was instituted.*

In 1829 a committee was appointed by the Legislature of Massachusetts to take into consideration the subject of "procuring such a map or such maps of the Commonwealth as the public good requires"; and in the following year this committee reported that "a good map, projected on a large scale, from actual surveys," was much needed. The old map of the State, made in 1801, "from authentic sources," and the surveys for which had been ordered by the Legislature in 1794, was no longer sufficient. The idea of a topographical survey and map seems to have been rather mixed up in the minds of

* Yet at the very time the Massachusetts Survey was going on, Bessel and Baeyer were doing the most exquisitely accurate geodetic work in Prussia, not to speak of the Ordnance Surveys of England, France, and other European countries.

this committee with that of a census and gazetteer; for in their report they state that, as a new census of the United States has to be made in 1830, as well as a new valuation of the States, "a great mass of appropriate information could be obtained free of expense." The committee did, however, see the necessity of a survey "on trigonometrical principles," and they thought that the work could be done "by some scientific gentleman," in one season, with such assistance as would be derived from information already on hand. If such a survey could be made, another one would never be needed; but it is modestly added that "a small appropriation for this purpose would be required." The idea was, that each town should make its own chain and compass survey. "Such a survey could be made by the selectmen," as the report has it, and the material thus acquired was to be put together on trigonometrical principles by the "scientific gentleman" employed to superintend the work. The engraving and printing, it was thought, could be paid for from the proceeds of the sale of the map. The action of the Legislature was in accordance with the above-cited recommendations of the committee; an appropriation of \$2,000 was made to carry on the work, and the towns and cities of the Commonwealth were required, under a penalty for non-compliance of \$100, to have minute and accurate surveys of their respective territories made within a year, and the State surveyor was to "project an accurate skeleton plan of the State," which should "exhibit the external lines thereof, and the most prominent objects within those lines, and their locations."

The triangulation was mainly executed by Mr. Simeon Borden and completed in 1839, with a higher degree of accuracy than was to have been expected under the circumstances, and in a manner very creditable to Mr. Borden's ability and perseverance. The astronomical portion of the survey was under the direction of Mr. R. T. Paine, and small portable instruments were employed, namely, the sextant, or reflecting circle,* and a number of chronometers. The precise object for which these astronomical observations were made, it is not easy to under-

* The name of the instrument is not given in Mr. Paine's report of his operations; it is simply called "a reflecting instrument."

stand, as it is not likely that they were ever used in rectifying the triangulation, which was of a higher order of accuracy than the astronomical work. When, however, the chain and compass surveys, made by the selectmen or their agents, came to be fitted into the main triangulation,—which should have been supplemented by a secondary series of triangles, so as to largely increase the number of points established,—there was much trouble, as might have been expected. It was an attempt to reconcile data of a very uncertain character; indeed it was a most thankless job, and the result was not satisfactory, falling far behind what had been expected, although the work had occupied thirteen or fourteen years, instead of the one year it was expected to take when commenced. The map as finished was on too small a scale—two and a half miles to the inch—to be of much use as a town or county map, and of course of no service as marking the lines or divisions between the estates of private parties. It was also very defective in respect to its exhibition of the character and relief of the surface, this being an item in the requisites of a good map not at all appreciated in this country at that time. A new edition was issued some years afterwards, on which an attempt was made to improve the hill-shading, which, however, was still very unsatisfactory.

Maps of several of the counties and towns of Massachusetts and New York, and probably of some other States, have from time to time been prepared and issued by private parties, who appear to have found the business profitable. The surveys for the county work appear to have been made by driving over the roads with an odometer attached to a wheel of the vehicle used, thus determining the distances with some approach to accuracy, while the pocket compass was probably chiefly relied on for direction. The names of the occupants of the houses are given, and small plans of the principal towns figure on the borders of these maps. Chartographic work of this kind is very defective, especially in the way of hill-shading; but it is better than nothing at all; and the fact that such maps can be made and sold with profit indicates very clearly how strongly the want of good ones is felt by the people. The books of city maps furnished by private enterprise are more satisfactory than

the county maps, but still far from being complete, and they especially lack the stamp of "official" upon them, so that they cannot be used where permanency and the law are to be taken into consideration.

From what has been said above, it will be readily gathered that we have very poor local maps of the Eastern States, and no good general one. One would suppose that the grand chain of the Appalachians, situated as it is in the midst of a civilized nation, would be well known to us even in the details of its remarkable and beautiful physical structure. This, however, is not the case; and if it is no longer true, as Guyot said in 1861, that it is "one of the chains of which we have the least amount of positive knowledge," it is chiefly due to the persevering and unremunerated labors of that distinguished geographer, during a decade of years, that we have now even a general idea of the character of this chain. Professor Guyot's investigations have had reference rather to the previously entirely unknown altitudes of different portions of the Appalachian range than to its structure; what we know of the latter is more to be gathered from his published verbal descriptions than from the accompanying map, which is on so very small a scale (1: 6,000,000) as to be, in fact, only a sketch.

Professor Lesley, who was the principal topographical assistant on the first geological survey of Pennsylvania, has also interested himself much in regard to the structure of the Appalachians, and even prepared a large map intended to illustrate the peculiar features of different portions of the range; this was, however, never published, although a part of it was photolithographed, as an illustration of a paper in which the typical topographic forms of this remarkable chain were discussed.

The deficiency of our knowledge of Appalachian topography may be, in part, excused, it is true, by the difficulty of surveying an intricate region of ridges of nearly uniform elevation, and densely covered with forests, which impede the vision, and thus render it impossible to work with rapidity; but the real trouble is, that the people have not yet been educated up to the point of fully appreciating the scientific interest as well as the practical value of accurate geographical and topographical work.

Mention should be made of the fact, that, during the War

of the Rebellion, a considerable amount of topographical material was obtained, through the assistance of the Coast Survey chiefly, in parts of Tennessee, Kentucky, Virginia, and other States which were then the seat of war. The need of the kind of information which only an accurate and detailed survey can give was keenly felt at the time our armies were moving over the *terra incognita* of the western slopes of the Appalachians, and it was hoped that the impetus given to this kind of work at that time would continue to be felt after the war was ended, and that the result would be, that under the lead of the older and richer States, the work of mapping the Atlantic border of the continent would be seriously taken in hand. Nothing has been done, however, and we remain apparently very much in the same condition as to geographical progress that we were in ten years ago. This is the case, at least, with regard to action on the part of individual States ; but the United States has taken several steps in advance, some of them very curious ones, as will be seen further on.

The United States Engineer Bureau has received from Congress large sums of money for many years back, nominally for "surveys for military defences." A considerable portion of this has been used for the topographical reconnoissances referred to on previous pages, and for many other similar and less important ones. The total amount thus expended it would be quite impossible for one outside of the bureau to state ; but it must have been very large, probably not less than \$100,000 a year, on the average. Previous to 1867 no system of surveys had been inaugurated, and but little if any work done of a permanently valuable character. The determinations of distances were almost exclusively dependent on estimates of the pace of the horse or mule ridden, and the astronomical observations by which the work was checked were extremely unreliable. This is well illustrated by reference to Lieutenant Simpson's work in the Great Basin. His longitude of Genoa, one of his three principal astronomical stations, where a series of observations of lunar culminations was made, appears now from the telegraphic determination of the position of the 120th meridian by the Coast Survey, to have been over eight miles out of the way. And in further

illustration of this, it may be stated, that on comparison and reduction to one scale of all the work done in the Great Basin by the United States Engineer officers, previous to 1867, by the writer of this article, it was found that no portion of it could be used for a general map of Nevada even on a small scale; indeed, the discrepancies of longitude and vagueness of the topography were so great on all the published maps of the War Department and Engineer Bureau, that no one chain of mountains, between the Sierra Nevada and the Wahsatch, could be identified as being the same with any range on the carefully surveyed map of Butler Ives, spoken of above, and which proved, on repetition of the work by the Fortieth Parallel Survey, to be remarkably accurate in its general delineations of the mountain masses, although in part deficient in detail.

In 1867 the Fortieth Parallel Survey was instituted by Congress, and the work placed nominally under the direction of the Bureau of Engineers, but in reality given to a civilian, Mr. Clarence King, who had as his principal topographical assistant Mr. J. T. Gardner, both of these gentlemen having been previously connected with the Geological Survey of California. Under Mr. King's direction, a belt of country over a hundred miles wide and extending from the western borders of Nevada to the eastern base of the Rocky Mountains was topographically and geologically surveyed with a much higher degree of precision than had ever before been attained in that region. The whole area was carefully triangulated, and the work checked by accurate telegraphic determinations of longitude at suitable points, as well as frequent observations for latitude with the zenith telescope. For the geographical map, which is comprised in ten sheets, on a scale of four miles to an inch, the hill-shading has been carefully and beautifully executed with the brush, and copied in crayon-work on stone. The geological work will be exhibited on contoured sheets, the curves being drawn at vertical distances of four hundred feet. Thus picturesque effect is combined with accurate delineation of the vertical element, so far as is practicable on the small scale necessarily adopted in the survey of so vast a region. This work is nearly ready for publication.

The success of the Fortieth Parallel Survey and the gen-

erally recognized value of the work led the Department of the Interior to inquire whether they also could not do something in the way of more accurate topography on the western side of the continent. A geological survey had been going on for some time, in the Territories of the United States, and under control of the Secretary of the Interior, but having no connection with the General Land Office, which is another branch of that department. This geological work, having no geographical basis, was of little value, except as a rough preliminary reconnaissance. To remedy this difficulty, it was proposed, in 1870, that a topographical corps be added to the geological, and, the sanction of Congress having been obtained, this was done. The remodelled survey was then known as the "United States Geological and Geographical Survey of the Territories," and the topographical portion of the work was placed in charge of Mr. Gardner, the principal triangulation of the Fortieth Parallel Survey having at that time just been completed. For the continuation of this work Congress has made liberal appropriations at the two last sessions, \$95,000 having been granted for the present year. The work thus far has been mainly confined to Colorado, and a map of that recently admitted State, in six sheets, is said to be in preparation. It is in the area which lies between the meridians of 104° and 110° and is included between the parallels of 36° and 39° , that the survey is to be prosecuted during the season of 1875. This embraces Southern and Southwestern Colorado and the northern part of New Mexico. Of the scale or style adopted for publication in this work no information has been received. A preliminary sketch showing the progress of the triangulation in Central Colorado, on a scale of eight miles to the inch, is appended to the report of progress for 1873; and a description of the method adopted for measuring the base line, and of the system pursued in the triangulation, is also added. From what has been published it may be inferred that this work will not fall short of that of the Fortieth Parallel Survey in accuracy, and that it will be of a much higher grade than any of the previous reconnaissance maps of the United States Engineer Bureau, in the region west of the Rocky Mountains.

Mention should here be made of a survey of the Colorado
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River, which has been going on for about five years, first under the direction of the Secretary of the Interior, and afterwards under that of the Smithsonian Institution. This survey, which is in charge of a civilian, Mr. Powell, had cost, up to the end of June, 1874, about \$62,000, and a liberal appropriation was made in addition by the last Congress for its completion. From Mr. Powell's statement, submitted last year to a committee of Congress, it appears that an area of 45,000 square miles of territory about the head and along the course of the Colorado River had been explored and surveyed by his party. This region is an exceedingly difficult one to map, being much cut up with deep gorges and cañons, and very dry, as well as distant from any practicable base of supplies. It is understood that this survey has been in part based upon a triangulation; but nothing has been published as yet from which any opinion can be had with reference to the style and accuracy of the work. It was probably admiration of Mr. Powell's pluck and endurance, as manifested in his at first almost unaided exploration of the cañon of the Colorado, which led Congress to encourage and adopt the work, rather than a knowledge of his having had any scientific training or peculiar fitness to be at the head of a topographical or geological survey.

The two surveys just spoken of, as will be evident, are duplicates of each other, since to a certain extent there does not appear to be any limit fixed to either of them by Congress so that they shall be prevented from overlapping. The term "survey of the Territories" is, of course, an unmeaning one, since that which was a Territory to-day may be a State to-morrow. Thus Colorado, in which most of the topographical work under Mr. Gardner's direction has thus far been done, is now within the Union, although only a Territory when the survey was begun. A survey of the Colorado River might, on the other hand, without any impropriety, be made to cover all or nearly all of Arizona, Colorado, Utah, and Wyoming, since all these are largely drained by the Colorado and its tributaries. Thus we have two independent geological and geographical surveys over an area of not much less than a quarter of a million of square miles west of the crest of the Rocky Mountains, and it will be noticed that these are both under the

control of the Secretary of the Interior, one of them directly and the other indirectly, yet both supported by special grants from Congress. This may appear to be a singular arrangement; but the reader will be surprised to learn that a third geological and geographical survey of the same area is also in progress, under the direction of the Engineer Bureau of the Department of War. This work is usually known as "Wheeler's Survey," having been in charge of a United States engineer officer of that name. It was begun in 1869, and last year the first number of an atlas was issued which gives an idea of the general plan and execution of the work.

According to an outline sketch in the atlas, the whole region west of the one hundredth meridian is to be represented on ninety-four sheets, each eighteen by fifteen inches in size, and on a scale of eight miles to an inch ($1: 506,880$); of these four are given in the first number, and these cover very much the same ground which is intended to be embraced in Mr. Powell's map. Thus far the field-work of Wheeler's Survey has been almost exclusively carried on in the same region in which Messrs. Powell and Gardner have been employed, and it is evident that this has not been done without design. It has been, and probably still is, the wish of the Engineer Bureau to put a stop to all topographical work done in the region west of the one hundredth meridian, except such as may be under their own direction. It has been for the purpose of forcing this issue, that the region in question has been divided off as mentioned, and that particular region selected for exploration which others were already engaged in mapping. Indeed, the matter has already been up before a committee of Congress, and a very unpleasant altercation had between the officers and employees of the War Department on one side and of the Interior on the other.* Those who wish to investigate the subject can find material for doing so in the documents to which reference is made in the foot-note. In point of fact, no good has been accomplished by the Congressional investigation; the work is still going on exactly as before. Instead of a careful and systematic consolidation of all the United States geograph-

* See House Report, No. 612, 43d Congress, first session; also Senate Report, No. 311, same session, and House Executive Document, No. 240.

ical and geological work in the Far West, under one supervision, in one department, there is just that method employed which leads to bad results and great waste of money. Congress is at this moment paying to have the same work done, on the same ground, by two, if not three, different parties, and in two different departments. At the investigation referred to above, the influence of the most eminent scientific men throughout the country was exerted in favor of the continuance of the geographical surveys begun by Mr. Gardner under the direction of the Secretary of the Interior. This was done because, as was clearly shown before the committee, the four maps issued by the Engineer Bureau, as a first instalment of the "Geographical Explorations and Surveys West of the One-hundredth Meridian" were so defective and so far inferior to the work of the "Fortieth Parallel Survey," that it seemed inconceivable that, when the public attention was called to the fact, the poorer work should not be stopped and the better allowed to proceed. Instead of this, liberal appropriations were made for both classes by Congress, this year as well as the last, and how long this condition of things will be allowed to continue no one can foresee. To those who, like the writer of this article, earnestly desire to see the geography and geology of the Far West carefully and economically worked out, and who know what a tedious and costly job it must be, even when most economically and conscientiously carried on, the present state of things is indeed disheartening. It shows, perhaps as well as anything can, the defects of our system of managing public affairs, if system that can be called which has no other basis than the whim of a Congressional committee, or the tact and persistency of some individual who has a private object to gain, and who for this purpose seeks a position for which he is neither fitted by education nor by natural gifts.

It is something for which to be thankful that the opposition of the Engineer Bureau has not succeeded in wiping out the appropriations made for the extension of the Coast Survey triangulation through the interior. And yet the amount given for this purpose, thus far, is hardly more than a nominal one. Even if the whole sum were confined in its expenditure to a single State, it would not be more than enough to push

the main triangulation in that one with even a moderate degree of rapidity. This may easily be inferred from the fact that, although the Coast Survey has been going on for about twenty-five years on the Pacific side of the continent, the main triangulation along the coast line, forming the basis of the hydrography, is very far from being finished ; one would say from a glance at the progress-sketch published in the Report for 1870, that it was not by any means half done, and this, of course, without including Alaska. Yet the amount appropriated for the work on that coast seems to have been quite large, since it was, for the year 1870-71, \$200,000, while \$275,000 was asked for its continuance in 1871-72.

We have thus reviewed the sources of chartographic information in the United States at the present time, and endeavored to show, to the best of our ability within the limited space available, what has been done and what is now doing in the way of gathering the materials for the complete elucidation of the geography of this vast country. We have next to turn our attention to surveys which are designated as "geological," and to show what their object is, and what progress they have made in different parts of the world, and especially within our own borders. We shall then be prepared to discuss, somewhat more in detail than has yet been done, the character of the topographical and geological work needed by that one of the United States which is most densely populated and wealthiest in proportion to its area. In doing this we shall have occasion to examine and criticise the official report presented to the Legislature in November last by the committee appointed "to inquire into the expediency of a new survey of Massachusetts."

J. D. WHITNEY.

ART. III.—*The Conflict of Studies, and other Essays on Subjects connected with Education.* By I. TODHUNTER, M. A., F. R. S. London : Macmillan & Co. 1873.

AMONG the most advanced nations, in this age of sceptical inquiry,—an age sceptical in the old and good sense of the word (noting that close examination of a subject which orthodox philosophers and divines have for so many centuries stamped with a black mark),—in this age nothing seems likely to escape a radical re-examination by discussion and experiment. Those matters for which a genuine loyalty might still be counted on to conserve past usages, the means, influences, and appliances to which scholars and men of culture acknowledge their deepest indebtedness, have not proved exceptions. We might even expect next that radicals will begin to call in question the superior amiability and attractiveness of their several mothers, wives, or children ; so stern is their repression of presumptions *à priori*, and so strong a motive with them is the obligation they feel towards the grounds of truth and reality, the foundations of all real science, which are common to all observers.

That there should, if possible, be a science of education, founded on something more than the traditions of the art or the success of past usages, appears to be the present demand of reformers. The wide-spread and growing conviction, that universities have not advanced their knowledge of their duties to mankind or to their several nations at the same pace as other useful institutions, and that legislative interference ought to undertake what the incumbents of university places have neglected, has given so great alarm to the latter, that they have turned a most energetic and earnest attention to the subject. The discussion, so far, has developed little more than the many-sidedness and extreme difficulties in practice of the problems of education. This, together with the zeal exhibited by the best university men, to bring all the light they possess or can command to bear on the discussion, will doubtless serve the purpose about which they seem most solici-

tous,— the purpose of avoiding, if possible, revolutionary measures, and the “danger that *any* reform should be adopted because *some* reform is required.” *

The problem of the higher general education of the universities,— what it should be, whether a simple *curriculum* or a variety of courses; what constitutes nowadays a liberal education; what are its ends; what are their relative degrees of importance in a general education, or in one preparatory in a general way, as the lower school training is, to more specific studies or pursuits,— this problem has rather been exhibited in its difficulties than advanced towards a solution by recent discussions. It is well observed by Mr. Pattison, Rector of Lincoln College, Oxford, that the difficulties in which elementary education is implicated, great as they are, are difficulties of action:— “How to carry through what we know ought to be done.” “The university question is quite otherwise.” “There would be little difficulty in getting anything done, if we could see our way clearly to what we do want.” To make the reformers outside of the universities feel this, and feel that the problem can only be solved by men practically acquainted with the business of education, seems to be one of the aims of university writers. Yet, we imagine that those who demand reform, in the name of the nation, look upon these writers as they would upon men pursuing other kinds of business, who, in the practice of means honored by long usage, and especially in devising the secondary and subsidiary means, are apt to have but dim perceptions of the ends to which the machinery or appliances of the art are as a whole, or should be, adapted. The means of the higher education, like all other means in practices of which the ends are manifold, conflicting, and only vaguely conceived, are naturally enough sought for in that kind of experience which is embodied in customs and institutions, rather than in philosophy or in a scientific analysis of the experience.

Next to the claim which their acquaintance with the details of practice gives to university writers on education, they rely on this slowly developed *experiment* (as they would like to

* Suggestions on Academical Organization, with especial Reference to Oxford. By Mark Pattison, B. D. Edinburgh: Edmonston and Douglas. 1868.

have it regarded) which the past usages of universities offer to observation ; although without definite purposes or guiding questions, not implicated in an experience, its evidence can hardly be with propriety regarded as *experimental*. It is quite true, and a just complaint of conservative thinkers, that the projects of reformers, the proposed changes in subjects, text-books, and methods of the higher education, have no better title to be regarded as experiments philosophically devised. Most criticisms on what universities have done heretofore are expressions of little more than dissatisfaction with the use of text-books, or even of subjects, or with methods of teaching and examination in subjects, in which the critics have either failed, or reached only a slight proficiency ; and advice is most freely proffered by those who are least acquainted with the matters in which they demand reform.

Upon a recent discussion in a scientific periodical concerning what modern elementary treatise is best adapted to take the place of Euclid (now considered antiquated by the reformers, though still supported by Cambridge and used in the best English schools), Mr. Todhunter observes that, "what appeared singular to persons accustomed to inquiries about education, was the readiness of persons to offer advice with most imperfect knowledge of the circumstances." We may add, that what strikes the latter sort of persons as equally singular, is the firm reliance of conservative thinkers like Mr. Todhunter, on his acquaintance with these circumstances, not merely as affording evidence that existing practices are good, or can be made very good without revolution, but that they are practically the best. Mr. Todhunter is doubtless right in claiming that no text-book in elementary geometry has yet been proved superior to Euclid ; but he does not appear to us quite justly aware of the disadvantages to which all novelties in the trials and experiences (we will not say experiments) in education are unavoidably exposed. The very complete and elaborate machinery of examinations in the classics and mathematics, to which Cambridge and the best English schools have given so much studious attention, would be wanting to all modern studies, and would need to be devised with equal care before the old and new experiences could be fairly compared.

The discussion needs to be weeded of many false charges and false arguments, which are as good or as bad on one side as the other, before any substantial progress can be made. Mr. Todhunter's essays will, no doubt, do good service in this way. No one could be found in any seat of learning better qualified as an expert witness (the capacity in which he appears to prefer to engage in the discussion, rather than as an advocate). A long residence at Cambridge, and much experience in lecturing, and in examinations on mathematical subjects are his main qualifications. Intimate acquaintance with the working of the machinery of examinations, and with the adaptation of mathematical studies to different minds, makes his testimony of great value, however little regard may be had for his opinions expressed as an advocate. It is interesting to find such testimony as the following : That the majority of the younger students of a university, not distinguished in their school-days for mathematical taste and power, have been "either persons of ability whose attention was fully occupied with studies different from mathematics, or persons of scanty attainments and feeble power, who could do little more than pass the ordinary examination. I can distinctly affirm that the cases of hopeless failures in Euclid were very few ; and the advantages derived from the study, even by men of feeble ability, were most decided. In comparing the performance in Euclid with that in arithmetic and algebra, there could be no doubt that the Euclid had made the deepest and most beneficial impression ; in fact, it might be asserted that this constituted by far the most valuable part of the whole training to which such persons were subjected."

So far as this is testimony to the practicability of mathematical studies for all minds, it is valuable. The testimony to the value of such studies to those whose abilities are of a decidedly different bent from the mathematical may still be questioned. Throughout his essays Mr. Todhunter's sole standard of value in a university study is that quality in it by which the machinery of lectures, text-books, and "pass" and competitive examinations, with emoluments and honors, can be of direct assistance to the student. On this standard he has a decided preference for the studies of the old *curriculum*.

For these and for advanced modern studies in applied mathematics adequate tests of examination and rewards of assistance and honor for success in them are means which are within a university's power to devise or command. To lay out courses and afford material aids in studies are all that remains of what a university can do for a student, unless it is so fortunate at times as to secure the services of men of genius (not to be reckoned among its ordinary resources), who have the rare faculty of stimulating the student to hard work by the interest they impart to their teachings. On this ground Mr. Todhunter seems to us to be strong. Nothing more in the way of mental discipline seems to be justly demanded of a university than not to think too highly of its resources, and to set its machinery aside on occasions in favor of greatly endowed teachers.

It is unfortunately too true, however, that such teachers have not always had the genius or sense to know that the exception is only properly made in favor of such as themselves. They have very frequently shown determined hostility to any use of methods which differ from the action of their own spontaneous powers of discipline, and which are really all the poor means that a seat of learning can constantly and systematically provide. This hostility could be just only if the genius were endowed with untiring and immortal vigor, or could educate by his inspiration a like genius in one or more of his pupils, who might then take his place. A natural genius for teaching any subject — by which we mean making the pupil an accurate and hard worker in it, like his master — is as powerless to reproduce itself in a pupil as university examinations are. We cannot by examinations, Mr. Todhunter observes, "*create* learning or genius; it is uncertain whether we can infallibly discover them; what we detect is simply the examination-passing-power of the candidate." Sir Humphrey Davy said "that his greatest discovery in science was Michael Faraday." Genius does not make a genius, but discovers him. Nothing more, not so much even, could fairly be expected of the best-devised system of examinations.

"The adaptability of subjects to the exigencies of examinations" is almost the sole test which our author applies to the

question of what shall be the course or courses proper to a higher general education, although he professes not to lay too great stress on this consideration, seeing that it is quite inapplicable to courses arranged for self-training. In regard to the value of the natural and experimental sciences this test appears to be with him quite decisive, though he thinks, if candidates were few and time ample, effective examinations in these subjects might be devised. It appears to us that this work falls within the province of a university's duties and is made feasible, so far as the number of students seeking honors through competitive examinations is concerned, if the university also makes it one of its duties, as that of our own Harvard has done, to lay out various courses, adapted to special classes of intellectual tastes. But even if the "examination-value" of modern subjects should never be made equal to that of the subjects of the old *curriculum*, this does not justify the university in not making such provision and affording such aids as it can for the action of a more genuine motive to study than its ordinary machinery seeks to bring into service. It is true that, without rigid and just competitive examinations, these ulterior motives of emolument and honor could not be fairly applied to studies in which they might be of very great service; but modern subjects might in themselves, and not unfrequently do, inspire the pupil and exact from him labors in a degree comparable to the influence of the most eminent teachers. Moreover, proficiency in them is capable of tests by teachers who closely follow the student's work, and by such original work in written theses as the study may inspire. One way in which the more immediate and genuine motive, the love of a study, could be made more efficacious, is not to tempt the student away from it by too great rewards for proficiency in those studies which have a greater adaptability to examinations.

It is quite natural that the importance of a study as a means of general education should be constantly confounded, by one with Mr. Todhunter's experience, with what the university can do directly in aid of it, or with its "examination-value." Although it is true that no other studies compare with the mathematical in the exercise they require, when properly taught, of

the active powers of intellect, or the inventive and imaginative faculties of the mind, yet it is not true that the mind needs always be in a merely receptive attitude towards such studies as history or the natural sciences. Mr. Todhunter admits that, in the study of a new language, it is not altogether the receptive attention that is exercised. His chief objections to other studies compared to the mathematical are, however, that they afford no problems in their earlier stages ; and, as he adds, " it is scarcely conceivable that examination papers in history or the natural sciences can offer any tolerable equivalent in merit and importance to the problems of mathematics." But it may be said, on the other hand, that mathematics offers nothing but the most uninviting entertainment to a receptive attention. Its truths, independently of the problems they suggest, have a weariness even for the adept ; while languages, history, and the natural sciences, though not exercising the mind with problems in the earliest stages of the study, could and should be made to do so as soon as the active powers of intellect are mature enough. The student may be made to *seek* for more authentic or intelligible evidence both in history and the natural sciences than what his text-books afford ; or he may be led to research in these subjects by comparing various authorities, or by original research ; though how he could be effectively led in this search by the requisites of a formal competitive examination is not so easily determined. To many thinkers on the subject of education this last consideration would only tell against the rigidity of the type of competitive examinations, which has been developed in Cambridge from the studies of the old *curriculum* and in modern mathematics.

It is quite true that the great qualities required and developed in philosophers by original research in experimental sciences are not produced, or even approached, by the repetition of their experiments. These, from being the devices of the most vigorous activity of genius, become, in the experimental lecture-room, or even in the student's own hands in the laboratory, comparatively unimproving amusements. It is one of the weaknesses of genius to recommend enthusiastically (what is generally quite impracticable) the course by which it has manifested itself and reached conspicuous emi-

nence. Nevertheless we attribute much more value to a first-hand acquaintance with experimental processes than our author appears to do. What he considers as a defect for which "some considerable drawback should be made from the educational value of experiments, so called," is their failure. This would certainly mingle unavoidable accidents confusedly with the merits of the student's performance in a set examination ; and would, doubtless, disconcert the examining board or teacher, as it often has the most skilful lecturers. But these very failures have in them an important general lesson, especially useful in correcting impressions and mental habits formed by too exclusive attention to abstract studies, and have also special lessons in their respective sciences. From the general lesson is derived an adequate appreciation of the difference between abstract or conditional theorems in science, and their exhibition in concrete phenomena. The difficulty of isolating universal and simple principles from modifying and disturbing causes in actual experiments gives an impression of the nature of physical laws very unlike what the principles of geometry might give, when not corrected by such lessons from the failure of experiments. The actual circles and straight lines of geometry are easily made to embody very closely the theorems of the science. But this is not their real use. Geometrical diagrams are not specimens or examples of the universal truths of the science, but are rather a language — an ideographic language — by which these truths are expressed and inferred.

It is a curious illustration of the need geometrical studies of the Euclidean or ancient type have of guidance from a logic especially treating of its methods and limits, that a recent English work on Logic, in use in one of our principal universities ("Jevons' Elementary Lessons in Logic"), should have represented geometrical reasoning as a kind of induction,—a reasoning from a particular specimen to all other specimens. As well might we say that the repetition of the meaning of a proposition, expressed in words by expressing it in other words, or in the same words, first printed, then spoken, is an inductive process. It is true, and may explain this confusion, that the axioms and postulates of geometry are inductions from elementary constructions, real or imagined, which are subse-

quently used ideographically to express them and their combinations in the deductions of the science. Mr. Todhunter, in his essay on Elementary Geometry, avows himself opposed to the study of logic in conjunction with geometry, as of too small advantage compared to the addition that would be made to the labors of schoolmasters. The mere fact that Euclid expands his reasonings into full syllogistic completeness is not reason enough, we admit, for requiring additional work by the teacher and student in the study of syllogisms, or in the analysis and classification of arguments. This amplification of arguments was really made by Euclid to simplify, not to add to, the labors of students and teachers. But logic in a wider sense—that is, some account of what are the self-imposed restrictions of resource and method which characterize the ancient geometry—would, we believe, be of great service to intelligent students. It is to the struggle against these restrictions that the superior value of ancient geometry, as a mental discipline, is mainly attributed by the best writers. They are like the conditions and restrictions imposed on artists and poets in the conventions of the fine arts, or on youths as laws of games and athletic sports; to which the intellect, the conscience, and honor of youth are keenly alive. Such restrictions are in the very spirit of that spontaneous ambition for self-formation which characterizes the period of discipline; that is, the period from late childhood to or beyond middle youth.

In respect to the special value of experimental practice to the comprehension of a science, Mr. Todhunter makes a most singular remark, perhaps intended as a humorous one. After observing that boys would doubtless delight in such practice, as they would in any other physical pursuits, like foot-ball, as compared to mental exertion, he adds concerning the value there might be to the boy of seeing with his own eyes the facts of science illustrated, that it may be said the youth is thus made to *believe* the fact more confidently; and he then remarks: “I say that this ought not to be the case. If he does not believe the statement of his tutor,—probably a clergyman of mature knowledge, recognized ability, and blameless character,—his suspicions are irrational, and manifest a want of the power of appreciating evidence, a want fatal to his success

in that branch of science which he is supposed to be cultivating." The power of appreciating the evidence of *testimony* would doubtless be shown deficient in the case supposed, or if the boy's *belief* was what the illustrations of experiment were useful in affecting. But the more direct effect of illustration is generally supposed to be to aid the *understanding* and *imagination*. A general statement about matters of which no illustrative or analogous instances have ever come under the student's notice is necessarily vague or even unintelligible, and is rather a subject of simple memory (or, so far as belief is concerned, of simple faith) than of rational comprehension. The latter consists in the ability to pass from the general to the particular, or from the abstract to the concrete, and to return again. This is the ladder of the intellect. Any number of formulæ, without a training of judgment and imagination by facts, any number of facts, without a training of the understanding by assured generalizations actually followed, if not originally made by the student, will fail to educate or discipline the faculty which is, *par excellence*, the mind. We do not go so far as many do in estimating the value for discipline of experimental practice. Only enough of discipline in the actual practice of experiments to enable the student to study his textbook intelligently seems to us desirable for the purposes of a general education, and independently of an ambition or design of extending the boundaries of an experimental science. This might be accomplished as our author suggests, and as Dr. Whewell believed, not by making the study of the facts in natural and experimental science a part of the business of a school, but rather a part of its recreations.

Mr. Todhunter apparently believes that the amusing has generally very little educational value; and much of what others would dignify by the name of "interesting" he seems disposed to place in this category. We should discriminate here between merely spontaneous and idle amusements and those pursuits which, because they happen to be interesting in themselves or at the outset, may not on this account be the less improving, or employ less energy or concentration of faculties than those which are hard or austere. Our author doubtless had in mind, however, a class of diversions lying in wait

for unwary students, and forming inseparable parts of certain studies. His type of studies, the mathematical, are certainly not amusing. Even their interest to the adept is of a profoundly serious character. But most studies, besides the mathematical, have tempting by-paths leading from them ; and geometry, even, is not without a danger of this sort. Mr. Todhunter says : " In my experience with pupils, I learned to look with apprehension on any exhibition of artistic skill among students of mathematics ; for I am sure that it is not a fancy, but an actual fact, that such a power was in many cases an obstacle to success." This observation is given in illustration of the independence of each other of different kinds of observing powers. The chemist is not (as a chemist, we should add) better qualified than another man to be a botanical observer, and the like is true between other dissimilar studies. But there is a more instructive application of the author's observation on the relations of artistic taste to geometry. The facility for drawing appears to be the only one incident to the study of geometry which tempts the student fatally into an attractive by-path from the difficult, unattractive road of the science. The comparative freedom from diverting attractions is one great advantage of mathematical studies, and we think that our author's esteem of them on this ground is just ; though he appears to us not to distinguish clearly enough between the value of difficulty and the quality of irksomeness, which is not of the essence of difficulty. In the period of youth and discipline difficulties are courted and welcomed, and do not necessarily repel. On the contrary, the true end of disciplinary studies appears to be through habit to gain attractiveness, or the character of play for useful, though perhaps at first irksome exercises.

Athletic sports, to which the name " asceticism " was earliest applied in its secondary sense of improving exercises in self-formation, were not disagreeable exercises to the old Greeks ; and although Mr. Todhunter looks upon their present prevalence in English universities with disfavor, he might have drawn from them lessons in the science and art of mental education. Even the training of the lower animals is not without instruction in this regard. Mathematical power, though

attainable with more or less effort by nearly every one, as our author has testified, is so difficult of attainment, and so irksome to some minds, that it may well be doubted whether general training or a liberal education ought not to be sought in many cases in a different direction. Care should be taken, of course, that the tastes opposed to mathematical pursuits should not have as their chief the taste for merely amusing or diverting pursuits, as they very likely do in most cases. Mathematical abilities seem to us strikingly similar in their relations to education to the faculty of "retrieving" in hunting-dogs; notwithstanding that metaphysicians have attempted to distinguish with characteristic profundity between the mental powers of the lower animals and those of men by *calling* the capacity of the one for improvement in mental power a susceptibility to *training*, and that of the other a capacity for *education*. It is a familiar fact to sportsmen, that unless the young dog shows a fondness for "fetching and carrying" it is almost useless to attempt to teach the accomplishment. For though fetching and carrying can always, with sufficient pains, be taught, yet the means of doing this also teach a vice which makes the faculty almost useless. The dog becomes "hard-mouthed" with his game. If an attempt to remedy this fault is resorted to by training to carry anything which it is disagreeable to hold hard in the mouth, the animal will generally give up retrieving rather than the vice.

It is natural to suppose that the severe training needed to develop in some minds even a tolerable degree of proficiency in mathematics will have some such effect; a narrowing effect similar to what excessive devotion to mathematical pursuits produces in minds of greater mathematical ability. "While engaged in these pursuits a student is really occupied with a symbolical language which is exquisitely adapted for a class of conceptions which it has to represent, but which is so far removed from the language of common life, that unless care be taken to guard against the evil the mathematician is in danger of finding his command over the vernacular diminished in proportion as he becomes familiar with the dialect of abstract science." To this testimony of our author on the disadvantages of mathematical training, we may add, that the

supposed value of mathematics for training habits of accuracy is delusive. The accuracy belongs to the science objectively. There is no such thing as ambiguity or vagueness in it, or the possibility of misleading the student by these defects, except by gross carelessness on his part. He either understands fully and accurately a proposition, or a step in reasoning, or he does not understand it at all. There is in the study no discipline in detecting and avoiding the faults inherent in common language and in the expressions and reasonings of other classes of conceptions. As well might an athlete seek to become an acrobat by exercises on a wide, even, and guarded path.

Again our author says, "I do not suppose that the candidates who attain to the highest places in the Mathematical Tripos are deficient in knowledge and interest in other subjects; but I fear that omitting these more distinguished men, the remainder frequently betray a rude ignorance in much that is essential to a liberal education." But this disadvantage is not peculiar to mathematical studies. The concentration of a dull mind on any single but extensive study or class of conceptions (like the legal, for example) is apt to leave it in "rude ignorance" of many subjects, some knowledge of which, retained in the memory, is the sign, rather than the essence, of an effective liberal training. What constitutes a liberal education is, as we have said, an unsettled question, or is arbitrarily determined by conventional standards, which are less regarded now than formerly. But it obviously has, at least, these two general features; namely, an acquaintance with a wide variety of subjects, adequate and correct as far as it goes, but necessarily superficial, or at second-hand; and, secondly, such a mastery of some one or two subjects in their methods and details, as will afford an adequate measure of the knowledge, or rather of the ignorance, of the mind, in respect to subjects of which it has only a smattering.

Another disadvantage in mathematical studies, admitted by our author, is the deficiency, as a means of discipline, of the modern and higher mathematics; a defect which is incident to their very perfections. When the perfect symbolism of the higher geometry is "cultivated for examination purposes, there

is the great danger that the symbols may be used as substitutes for thought rather than as aids to thought." By this we suppose is meant that the abridged processes and notations of modern geometry make it possible for the candidate to carry the theorems and their proofs in mere memory for the most part, and without understanding, or without that rational memory, to which such symbolism is a true art; so that the examination will fail of its end. Yet in abstract subjects all thought is by means of symbols; whether these are the words of common language, the comparatively numerous and awkward steps in the expression and inference of theorems by the diagrams of the old geometry, or the refined, abridged, and effective notations of modern mathematics. The latter are substitutes for thought to the mathematician who has mastered them, in the same sense as a single philosophical term is a substitute for a paraphrase or definition. They save *useless* thought, or repetitions of thought when used as instruments of investigation, either in pure or applied mathematics; and though the thought that is thus avoided may be useful in mere discipline, yet is mainly useful, we should suppose, by serving as checks, through an easy transition to intuition, for the guidance of reasoned processes, in which the mind still feels insecure.

The true value of these notations is objective; or is in that which most essentially distinguishes the modern from ancient geometry, its direct applicability to other sciences. The ancient geometry is no longer to the physical philosopher the misleading type it once was, of pure principles, or of rational comprehension. It is nevertheless, in one respect, as good a discipline as ever in the education of the mind, and is so on account of its very defects as an instrument of investigation. Its self-imposed restrictions of method adapt it pre-eminently to the spirit and uses of discipline. The modern mathematics are really as distinct from it in essential characteristics as from logic or grammar. Compared to ancient geometry, the objective ulterior value, the usefulness, independently of discipline, of the modern mathematics is immense. The various branches of exact physical science are closed studies to those who have not gained possession of this instrument of all exact inquiry. These can only view the outside of

the temple. "Admission to its sanctuary, and to the privileges and feelings of a votary, is only to be gained," as Sir John Herschel says of astronomy, "by one means,—sound and sufficient knowledge of mathematics." The relative claims of this immediate use of a study and of its disciplinary use or "examination value" are chiefly considered by writers on education in relation to the limits of time they propose for disciplinary studies in general. Mr. Todhunter objects to "the continuance of examinations far into the years of manhood," and also "regrets to see this discipline commenced at too early an age." In the former usage of his university, "when mathematical studies were regarded mainly as a discipline they were frequently entirely dropped or indefinitely postponed when the period of undergraduate discipline was completed." The most eminent scholars were thus sent forth from the universities, having made only a tantalizing approach to any direct use of mathematical skill, and deficient in a knowledge which many of them must afterwards have felt to be an essential part of a liberal education.

What we call the objective value of a science is what should be meant by calling it "useful knowledge." For if the specific utility of any knowledge is not indicated by calling it useful, this term can only mean that the value of the knowledge is not especially in itself, as distinguished from ignorance, error, or stupidity; or is not the kind of value which a well-ascertained but isolated, unrelated fact may yet have as a mere fact; such as the number of leaves on a given bush. In the acquisition and memory of such facts idiots not unfrequently emulate philosophers. The philosopher's advantage is that he has the power to select the related or the useful facts and to forget the rest. This selection is the prime function of intellect. The usefulness of knowledge is in its relatedness or ulterior value, whether as leading to other and wider ranges of knowledge, or as a discipline of the mind, or even as leading to "bread and butter." This last utility is what the unqualified term "useful" generally refers to in common language. Hence the objection to its employment. The popular teaching of natural and experimental sciences by lectures has in recent times been practised apparently on the ground that they are

useful in this sense. It is doubtless true that astronomy, chemistry, and physics are deserving of honor from the unlearned, as well as from scholars, on account of the great incidental services (not generally designed or anticipated in their pursuit) which they have rendered to the arts of life; or on account of their utility in the narrowest, most destitute sense of the word. Wealth and leisure are indispensable requisites to the philosopher's and scholar's pursuits; and it may be said that the means by which these are secured for their pursuits, in any community, ought to be prominent objects of their study and care. Yet, if such had been the motives of physical philosophers in their pursuit of such a subject as electrics, or magnetism and galvanism, if wider, vaguer, less-defined utilities, or relations of knowledge, had not been the almost exclusive motives of this pursuit, it is almost certain that the many useful applications of electrics in the arts would never have been reached. The same is true of other branches of physical and natural science and of applied mathematics. The utility of non-utilitarian motives (in the narrowest sense of the terms) justifies the motives even from the lowest grounds. Where it is demonstrable, as we might suppose it to be of comparative philology and the science of language, that the pursuit can never lead to any such results,* and is even deficient in applicability to university examination purposes, yet even here the spirit of the pursuit is the same as in natural and experimental science, and it is to this spirit, rather than to its occasional and incidental services, in unforeseen ways, that honor for the service is due.

Not only the knowledge which has thus been popularly honored, but all "useful knowledge," in this wide sense, should be fostered by the universities. That which, however, needs especially the care of the universities, is the knowledge which is not, and does not promise to be, useful in an economical sense; the pursuit of which is not stimulated by the prospect of rewards, in fees or wages, or in any ways proportionately to the exertion made. "If," says Mill, "we were

* The recognized political value to English rule in India of studies in these sciences by European scholars preclude, however, the supposition of even such an exception.

asked for what end, above all others, endowed universities exist, or ought to exist, we should answer, ‘To keep alive philosophy.’” It is, of course, in the devising and working of its machinery that the time and energies of the officers of a university are chiefly employed; by which young men are helped, encouraged, and tested in their pursuits of culture, and are then sent out into the world bettered in ability and character by the discipline they have received. “How,” it may be asked, “can this be a service to philosophy, and to the knowledge which is useful only in a higher sense?” “Our obligations are to the nation, not to philosophy,” the university officers might answer. “We are bound to see that the young men who come to us become thorough and accurate students of whatever studies they pursue, and become prepared for their duties in life by the discipline most conducive to accuracy and scholarship. The studies best adapted as means to these ends are the studies we must foster. We must be able to unmask ignorance in our ‘pass’ examinations; to reveal knowledge in our competitive ones; to compare competitors justly and to reward the most successful. If the studies chosen for these ends are not sufficiently philosophical, then we must sacrifice philosophy to our duty to the nation.”

We believe we have not overstated in the above the views, and the point of view, of the university men who think at all about the subject. Perhaps more attention to the claims of philosophy, or of a knowledge for the sake of a higher knowledge, would have avoided or remedied the defects which our author finds in the Cambridge system of examinations. He is disposed apparently to go back to past usages, though he sees little to encourage the hope of a return. “In the study of mathematics formerly, as a discipline, a general knowledge of the principles was all that was required; now,” he adds, “we insist on a minute investigation of every incidental part of the subject. Exceptions and isolated difficulties seem to receive undue attention on account of their utility for the examiner’s purpose.” Again he says, “As a general principle it may be said that the older practice in education was to aim at the discipline of the mind, and that the modern seeks to store it with information.” And again, “It may be, I think,

justly charged upon our examinations that the memory is over-cultivated and rewarded. As I have already said, examinations in some subjects, as in languages, for example, must necessarily be almost exclusively tests of the memory; but what we may regret to see is that in examinations in subjects with which the reasoning power is supposed to be mainly concerned, the memory should be severely taxed."

On the other hand he repels the charge against the examination system that it encourages *cramming*. This term as applied to various practices seems to him to lack any fixed definite meaning, other than an implied censure of rigorous examinations in general. He conjectures that one definite meaning in the word may relate to the tendency in examinations to over-cultivation and over-appreciation of the memory. But he denies that this is a fault or an avoidable one in such subjects as *language*, in which "it would seem, from the nature of the case, that the memory must be the principal faculty that is tested." Special and exclusive devotion to a single study in completing a school-boy's preparation for an examination does not appear to him to be properly called *cramming*, or at any rate to deserve the reprobation meant to be conveyed by "this absurd and unmeaning word." Our author's reprobation of this word, and of the criticism on examinations in general conveyed by its use, is a key to his whole theory of education; or at least defines the position from which his observations were made, and by which the bearings and value of his testimony should be estimated. There is, it seems to us, a slight inconsistency in objecting, as he does, to the value of natural and experimental sciences, as a discipline, on account of the time and pains needed for examinations in them, which he thinks would be excessive; at the same time admitting in regard to the studies he approves of, that undue attention to exceptions and isolated difficulties in them is given on account of the utility of these to the examiner's purpose. That is, he contrasts two kinds of studies in respect to defects, which it appears both would have, but which are really due to a system that does not admit, on account of these defects, of application to both kinds at once.

The examiner's purposes, the secondary or subsidiary means

of discipline, are likely in his pursuit, as means are in all other pursuits, to receive undue attention, and the proximate means to the true ends to become ends in themselves ; especially, as we have said, when custom or long usage has sanctioned them and is the easiest escape from difficult questions. How to make the studies previously found useful in discipline still more useful ; how to avoid defects in the examinations, to prevent the memory from doing the proper work of the reason in these tests of proficiency ; how to prevent the evils, whatever they may be, of *cramming*, are the highest problems in education to which university men generally give their attention. To them it is a sufficient objection to modern studies as means of discipline that they are not fixed or finished sciences, but are constantly undergoing changes and improvements at the hands of special adepts, which are more fundamental than the changes, improvements, and expansions made in older subjects solely with reference to their use in education. In short, the officers of universities are as innocent of philosophy as most other men in business generally are. "The fashionable subjects of the day" disconcert the examiner. If these are capable of inspiring a patient and laborious attention in the student by their own inherent interest, it is well. This is the way in which they may be useful, but the professor and the examiner with his rewards of assistance and honor have no concern in it ; or their duties are done by putting the new subjects into the highest examination papers.

The corporate spirit, the conscious union of aims and the purposes common to all in such a university, is not a very high one. Conservatism, reverence for the traditions of the university, attachment to it as a family of scholars, pride in it for the importance of its services to the nation and to mankind, are the sum of its conscious virtues, the limits of its aspirations. If so be philosophy seeks or can find entertainment in this family, she is welcome ; but is still a guest, not an inmate. If it were not for the wealth or the appropriations of it which serve to consolidate these as well as other families, it might be otherwise. Philosophers were so named because they refused the pittances of schoolmasters ; but it is difficult to see how they could have lived without them, or what was equivalent to

them (though called by a different name), if they happened to be poor, as they generally were. But it is not perhaps by a disposal of means essentially different from what now prevails in universities, that a remedy for their defects is to be sought. It is rather by a different *spirit* of disposal. *In order that the distribution of assistance and honors might be perfectly just, a system has been devised which inevitably places ulterior motives to study in the first rank of incitements.* A definite though factitious direction thus given to the efforts of teachers is the best excuse that can be clearly urged for this promotion of ulterior incitements to study. Comparatively few candidates continue throughout their academic course to be stimulated by them, the majority being soon distanced; yet these few are those who least need or are really profited by such discipline; while the majority have their studies chosen for them on such irrelevant grounds as would be disregarded in a choice of courses arranged for self-training, namely, "the adaptability of subjects to the exigencies of examinations." We admit the difficulties of reform, while insisting on its importance. It is at least one step towards it to recognize this importance, and to know, however painful the consciousness may be, that our loyalty and pride are not fixed upon the highest objects; that a justice which cannot go by favor is yet not the greatest justice. It is not the justice of natural families, nor of families of philosophers. These may not reach practically a very high type; they seek, however, for justice through other means than regulations; they love to receive it at the hands of honest and intelligent generosity, rather than win it from the hands of inflexible law. One would suppose that in a university, if anywhere among men, this dangerous, impracticable higher justice might find a seat; but an English university would be the last place where one would wisely seek for it. Such is the influence of competitive examinations, that the justice of them is more hostile to this rival than to any form of injustice. This may be because the rival is, in a university, a really formidable and dangerous one; so that it becomes the chief business of the reigning power to maintain its throne. At any rate Mr. Todhunter thinks it highly important that the justice of competitive examinations should be additionally guarded, by exclud-

ing teachers rigidly from the examinations of their own pupils in competition with others. This is indeed a confession of an inherent, rather than an incidental weakness in the system.

That the ends of a liberal education are manifold, and are vaguely conceived in their just proportions ; that the means to the various ends, which may be consciously sought, are often conflicting ; and that the attention of those who make education their business is definitely directed by a traditional *curriculum* to the subsidiary means of perfecting its use,—are perhaps sufficient explanations of the feeble attention given by scholars to the higher or ultimate ends of training. That our author, with all his study and experience in this subject, should have failed to discover any definite meaning in the word *cramming* beyond its implied censure of rigorous examinations is, therefore, not surprising. If we may venture to say in a sentence what the word commonly means, when used intelligently, we may say that a given amount of studious attention, either rational or merely mnemonic, given to a subject exclusively and for a short time, gives to the mind a different and a less persistent or valuable hold on the subject than the same amount and kind of attention spread over a longer time and interrupted by other pursuits. This mode of study and its defects are what we conceive the word *cram* is meant to express, and at the same time to censure.

All modes of study involve, of course, *repetitions* of such degrees of attention to a fact or conception or inference as the student's powers can command. By these repetitions the memory is made firm and persistent. But there are two very different modes of repetition : first, by repeated acts of *direct* attention ; secondly, by repeated recalls or recollections. The latter has two varieties, namely, being repeatedly reminded by associated thoughts or objects of the things remembered, and performing repeated acts of voluntary recollection or research in reminiscence. The last is the only *active* exercise of memory, and is, of course, most strengthening to a *command* of memory. But both these varieties, and especially the latter, require, for disciplinary exercise and trial, interposed intervals and diversions of attention ; and the longer the intervals are, if not too long, the more the essential or rational, and the far-

reaching or constructive associations of thought come into play, or the more the “reason” is cultivated, according to the common expression of this practically well-known fact. The reason is a slow growth, and cannot be forced in any study, though in some it may readily be blighted.

There is a popular opinion, shared by some philosophers, that great memory and sound judgment are incompatible, and the words *Beati memoria expectantes judicium* express this supposed incompatibility. And there is a basis, doubtless, for this belief. The more essential or rational and the far-reaching or constructive associations of thought are by far the most durable, and constitute the inner life, or sub-conscious action of thought; though the associations which are temporarily stronger are most readily commanded, or are parts of the present volitional power of the mind. In other words, the retentiveness of memory as distinguished from recollection, or from the power of ready recall, depends on the thoroughness of understanding, or on the number of links of mental habitus binding together and leading to the things remembered. The apparent contradiction, which Sir W. Hamilton regards as a real one, between the great learning of the philosophic scholar, Joseph Scaliger, and his statement that he had not a good memory but a good reminiscence, that proper names did not easily recur to him, but when thinking on them he could find them out, is a good illustration of the distinction between the readiness of a sensuous or first-hand memory by rote, and the more durable memory of a reflective and subtle understanding, which involves a greater real command with sufficient pains, though not so ready a command of remembered objects. There was no real inconsistency between Scaliger’s confession and his great learning, or even the readiness of his memory on occasions. His own testimony is worth much more about his own memory than any contemporary’s judgment from his talks, such as Sir W. Hamilton quotes in his *Metaphysics* (Lecture XXX.). Reminiscence appears to have been used by him in the sense of a power of attention to recover what did not readily recur to him, and ought in this sense to be distinguished both from mere retentiveness and from readiness of recollection; the latter being the sense in which he used the word *memory*.

But so far are sound judgment and memory, in a wider sense than this, from being incompatible, that judgment is in fact a form of memory,—the most subtle and serviceable, though least readily commanded. It is the memory or the retentiveness of understanding, or of the generalizing faculty; just as what is commonly called memory is the retentiveness of imagination, or of the faculty of individual and concrete representations. The soundness or excellence of both forms depends, of course, on the powers of attention and primary perception.

“That the memory is over cultivated and rewarded” by the incitements and exactions of examinations in Cambridge is what our author admits. That this is due to the mode of study they encourage is what he has failed to see. The abuse to which examinations are liable of testing memory when the faculty of reason is the one under examination is a fault which our author has seen, as an examiner in mathematics, and against which he believes the examinations can and should be guarded; and it is not, therefore, he thinks, one which ought to condemn the system. And so far we go along with him, but the real defect of the system is subtler than this.

Examinations may be guarded against mistaking a simple memory of the lowest order, or mere memory, for a rational comprehension of a subject; but the faculties trained by mental discipline are not so simply classified as writers on education appear to think when they enumerate them as memory, reason, and invention or imagination. There are various kinds and orders of memory, and *the highest of these, together with the highest order of invention, involves the faculty called reason.* The faculties which ought to be tested by examination are properly *memory and invention* in their various orders, and in the kinds in which various studies have disciplined them. Examinations in languages and history are mainly tests of memory, Mr. Todhunter thinks; but how different are the orders of memory involved even in these! How different is the child’s memory of stories from that of a student of comparative mythology! A quick, retentive child’s memory will note every variation in repeated recitals of a tale, and will correct the story-teller on points which seem to the adult mind quite trivial, but are in

fact to the child essential enough to make a different story. When the comparative mythologist, on the other hand, finds identity amidst the varieties of legendary tales of various races and nations, his memory of them is of a different order from the child's. History or language may be remembered in these different ways, and no *system* of competitive examinations would be able to detect the difference. A difficult construction in an author writing in an ancient or a foreign language might be satisfactorily construed by the candidate either because he retained in simple memory, as an isolated fact, the explanation of it given by his tutor (which might be much more rational than the student could gather from a literal translation), or because he had, like his tutor, met and noted parallel or analogous constructions in the same or in other authors (thus exercising his reason in a still better way). How vastly superior, indeed, the latter form of memory is, in persistency, in utility for professional employments, and in the satisfaction of thought itself as a mental exercise ! If this cannot be distinguished by formal examinations from lower orders of memory, the fact ought to tell against the system rather than against those studies which are ill-adapted to it, and which include almost all except mathematical studies ; or even include these when the system is not elaborated to the perfection it now has in Cambridge.

A broad distinction in the kinds of mental association, dominant in different orders of memory, is familiar to psychologists, though apparently not to most writers on education. The associations of mere contiguity or consecutiveness are characteristic of the child's mind and of imaginative poetical persons. A low order of invention goes along with them, namely, the order of poetical or artistic invention, which is intellectually inferior, and is not cultivated systematically by universities, although valuable to the artist or poet, and highly influential in works of genius. If the memory dependent on this kind of association is naturally strong, and continues after childhood with but little systematic practice or effort, it may be regarded as a positive advantage to the mind, as a form of native strength ; though the exercises and mental habits required for the cultivation of it are directly opposed to those needed for the cultivation of the higher or rational memory and invention. Com-

mitting pages of rhythmical verses or simple elegant prose to memory, though not exclusively dependent on associations of the lowest order, yet depends very largely on them, and interferes as a habit with the habits which bring into play the other kind of associations which psychologists have distinguished, namely, the associations of similarity. This kind of associations brings together resembling, analogous, or identical parts in different trains of contiguous or consecutive impressions, or drops from these trains into oblivion all the parts that have not with the rest ties of this sort, or else the contrasted ones of dissimilarity. The associations of similarity are those of rational comprehension in memory and invention. They dissolve the ties of the other sort, which are relatively so strong in children, in natural arithmeticians, and often in the undeveloped minds of idiots. The two sorts rarely exist together in great perfection, or except in men of eminent genius, whose native powers of attention are equal to those of two ordinary minds.

Hence for minds which schools and universities undertake to train, the needed discipline is not the training of two distinct and unrelated faculties (the memory and reason), by studies specifically chosen to test their proficiency ; but it is the supplementing of a lower and original, or early developed form of memory and invention by a higher one, even at the expense of supplanting the lower in great measure. In the most rational of studies, the mathematical, the constituents which depend on mere memory, or the lowest kind of association, are the fewest, and the play of invention, in the constructive action of rational imagination, is the greatest. Perhaps the latter is too great for a symmetrical training of the mind ; since, in a genuine pursuit of mathematics, the lower form of memory is apt with ordinary minds to be enfeebled by it. The lower form of memory is still a very valuable one ; though the cheapness of books and writing-materials dispenses with many of its services. Even *cramming*, or the getting up of a subject in the shortest time, which depends largely on powers of retention of this sort, and but little on the fixed habits formed by studies more prolonged, might on this ground be commended ; though *cramming* mathematics for examination would obvi-

ously not be the best course ; since other studies, pursued properly, would more directly and profitably exercise these powers by the concentration of attention.

The *ability* to "cram," which such work in the universities must, of course, cultivate, has been thought to be an element of success in various pursuits of life, as with the statesman, the general, the lawyer, and with men of business ; but we are inclined to believe that the use in these pursuits of the lower form of memory is secured to successful men by their ability to stimulate its action on occasions by throwing into it their superior energies of purpose, emotion, or will, rather than by university practice of this sort. Light is thrown on this subject by the well-known facts in psychology, that the lower memory depends on two distinct causes, on the *repetition* and on the *intensity* of impressions ; and that impressions which are at all relevant to states of strong emotion are more deeply and persistently impressed than under ordinary circumstances. Even trivial, irrelevant circumstances attending or coming under our notice in states of strong emotion are long retained in the memory. If this be the true explanation of the great service which the lower memory sometimes renders to eminent minds, it would follow that it is not by the direct cultivation of the memory, but rather by cultivating this cause of it that discipline can be useful ; that is, by exercises which stimulate to energetic action the emotions and the will. Athletic training and exercises are of this sort, and though they do not employ the memory, may yet, by the sustained mental effort required in them, educate the character to a better command of memory on fitter occasions. No faculty is in general more susceptible of training than that of attention *in the directions in which it is spontaneous* ; and, on the other hand, no faculty is more dependent on the native aptitudes and powers which direct it. The antithesis is due to the extreme generality of the term "attention," which includes in its meaning both the original or spontaneous powers of the mind, and those which discipline is capable of perfecting or improving with reference to any standard. Much of the superiority of eminent minds is, doubtless, in a native or early acquired degree and kind of power in attention, which none of the motives of direct disci-

pline can create. This is true also of the lower animals ; superior native or spontaneously acquired powers of attention being regarded by their trainers as indispensable to success in training them. Of this contrast between genius or native character and ordinary mental ability, genius itself is not in general made aware by comparison with ordinary standards, but usually attributes its success to a prolonged and patient concentration of an ordinary attention, which is merely voluntary ; thus converting into a merit, or a moral superiority, what are really gifts of nature. But in this explanation of itself neither genius nor character takes account of the motives or the pleasures of action and effort which make patient labor and sacrifice easier for it than for inferior orders of minds, for whom moral incitements and rewards are, therefore, more needed ; and genius is apt to take no account of the finer quality of its powers of attention, which it attributes to the objects or the occasions to which its efforts are " accidentally directed." The pre-eminence of genius and of native character is really manifested in the equality of abilities to exceptionally difficult works ; though it is made indubitably evident and a subject for fame and history only in the latter, as compared to the results of ordinary abilities.

Command of the lower memory is doubtless improved by the mastery of some one or two subjects ; the more special and narrow they are, the better, perhaps, for saving time ; and even if they do not belong to what is commonly accounted essential to a liberal education. It should, however, be such a mastery as is conducive to the formation of mental habits, and not such as can be compassed by *cramming*, or the exclusive study of any subject for a special purpose and in a limited time. A young officer of the Union army in our late struggle, in a letter written on the evening before the battle in which his life was sacrificed, attributed his previous successes, and rapid promotion to responsible duties, to a six months' study of *turtles* at the Zoölogical Museum of Harvard University, which was undertaken merely from the youthful instinct of mastery, or appreciation of the value of discipline, and was interrupted by the breaking out of the war and the young man's enlistment in the service. Perhaps, however, the inde-

pendence of character which determined this choice of means for discipline was the real source of the success which the youth too modestly attributed to the discipline itself.

It is all-important in considering the problems of education to have clearly before our minds what are its true ends and its most direct proximate means. This is far more important, in a philosophical consideration of the subject, than any amount of evidence on the working of a system of subsidiary means supposed to be adapted to ends very ill understood. It is a far more important question than that to which answer is made in the testimony of experienced teachers and examiners as to the value of any system of examinations for testing a youth's "examination-passing-power." This testimony may be good evidence that a university is really doing, and doing faithfully, what it professes to do ; but it is not a proof that its system is the best, or that its ideas of a liberal education are soundly based either in experience or philosophy. It is not a proof that philosophy is kept alive in such a university, even to the degree of inspiring a hope beyond the seeming practicable, or creating any desire for a wider range of influence, or for a more comprehensive knowledge of its duties.

CHAUNCEY WRIGHT.

ART. III.—AN EPISODE IN MUNICIPAL GOVERNMENT.

III. THE RING CHARTER.

THE Tammany Ring charter for New York City was passed in the month of April, 1870 ; it was in July, 1871, that the New York "Times" electrified the whole community by the earliest authentic exposure of the frauds of those who under it had been intrusted with a power little less than supreme. The fifteen months intervening between these two dates were halcyon days to Messrs. Tweed, Sweeny, Hall, Connolly, and their coadjutors and satellites ; for, though not devoid of anxieties and forebodings, those were the months in which the Ring was at the acme of its glory ; it seemed actually under

all the sanction of law to have possessed itself of the pick-pockets' "bonanza," — a license to steal. The dry-nurse-and-leading-string's system of government for New York City had been tried and had resulted in ignominious failure; for it had made New York no better and Albany a great deal worse. A mere temporary expedient, the whole system of municipal government through commissions emanating from the Legislature at Albany at best could only defer the evil day, and now that it had fallen into utter disrepute the inevitable end was not remote. Under the new charter of 1870 the very best course possible to be pursued had been pursued. The city of New York was turned over for government absolutely and finally to those whom the people of New York had placed in the positions of municipal authority. An unhampered logical result might now not unfairly be looked for; if the system was inherently bad, it would break down and there an end; if there was any virtue left it, it would surely vindicate itself. Not that in either case the result would be final, for in the New York City problem a great deal more than the mere local government of Manhattan Island was and is involved,—in it nothing less than republican government in cities is on trial. If it had finally and conclusively broken down in 1870, it would only have remained to substitute some other system for it under which the community could live and develop; and had the city been left alone this would surely have been brought about in the best way of which the circumstances permitted, though as the result of how much suffering, outrage, and fraud no one can venture to say. The mere fact, on the other hand, that the better element in New York City sustained itself in the bitter struggle which was precipitated by the passage of the charter of 1870 necessarily implies very little so far as the future is concerned. It merely proved that as late as 1871 an approach to a government republican in form was not yet impossible in New York City.

The essential features of the charter of 1870 consisted in an executive board, subordinated to which was a series of departments the business of which was conducted by commissioners. The executive board, or Board of Apportionment as it was called, consisted of the gentlemen, or, as they might perhaps

be designated, of the Knights of the Ring, Messrs. Tweed, Sweeny, Hall, and Connolly ; while the department commissioners were to be the appointees of the Mayor, in whom also was vested the sole responsibility for their conduct, with exclusive powers of impeachment or removal. In due time, therefore, Mayor Hall proceeded to announce his appointments to the different departments, or rather to apportion them among his brethren of the Ring. The entire control of the Department of Public Works was allotted to Tweed, while Connolly retained the Comptrollership, and Sweeny became Commissioner of Public Parks. Some twenty other officials were also appointed to the Departments of Police, Parks, Docks, Charities, and Corrections, and to the Fire and Health Boards ; but the School Commissioners had already been appointed a short time before. Of the character of the appointees it is hardly necessary to speak. As a rule they were members of a single political party, the Democratic, although naturally the Tammany Republicans could not well be forgotten and were not wholly ignored ; had they been, one leading characteristic of New York City politics would have been wanting to the transaction. In his proclamation Hall referred to this subject, stating that he had felt "an honorable obligation to respect the political minority of his constituents, so far at least as to appoint a few of his political opponents whose past services to the public additionally deserve the recognition." The names of the "political opponents" thus selected will warrant some inferences as to the character and value of the "services to the public" here referred to. Messrs. Murphy ("Tom"), Smith ("Hank"), Manierre, Sands, and Henry have more than once been referred to in the course of these articles, and they were all reputed to have been actively concerned in the passage of the charter ; while Judge Hilton was appointed out of compliment to Mr. A. T. Stewart, whose confidential man of business he was. But all the appointments were not distributed in consideration of past services rendered. The members of the Ring generally, and Mr. Sweeny most of all, had a desire to add some little respectability to it, — it was now rich, it was powerful, and its members were growing old, and it really could not afford longer to consort

with the reckless associates of its wilder youth ; so the cold shoulder was turned upon O'Brien, Morrissey, and the rest of that stamp, and harmless representatives of the more orderly class were substituted in their place. The effect of this policy was highly beneficial. The respectable classes were only too ready to accept service under the Ring, which had little to fear from any rebellion on their part once they had done so. Besides, Tweed and his associates were far too shrewd in these cases to allow aught besides the semblance of power to pass out of their hands.

The administration of municipal affairs being now properly divided among the members of the Ring, their friends and followers, business was in order,— or, more strictly if more coarsely speaking, “the steal” was in order. Indeed, while the method was obvious, the occasion for this was now becoming more and more pressing. The passage of the charter had been one of the very most expensive legislative “jobs” on record, and those who had advanced the funds necessary for effecting it were unpaid and were clamorous for money. Now it so happened that a large amount of municipal indebtedness, which had from time to time through a series of years been fraudulently incurred, had by acts of special legislation been converted into valid claims, which three of the four members of the Board of Apportionment were in their respective departments empowered to provide payment for. A further series of nefarious municipal jobs had also been carried through during the period anterior to Hall's election as Mayor, at a total cost to the city of some five million dollars. It has been stated that during the interval while Coman was acting as Mayor, subsequently to Hoffman's election as governor, preparations had been made to liquidate this debt through the issue of bonds, which had even been printed and stamped with the municipal seal ready for Coman's signature. The passage of the measure by the Board of Supervisors was to be secured by Tweed, and the scheme seemed complete in every part, when suddenly doubts were suggested whether the proceeding was warranted by law, and it was accordingly abandoned. The Ring now, therefore, seized the opportunity, which the general clearing off of liabilities provided for by the fourth section of the tax levy for

1870 afforded, to finally dispose of these long-deferred claims. The section referred to was one of Sweeny's dexterous manipulation. Under it all liabilities of the county of New York incurred prior to the passage of the tax levy were to be audited by the Mayor, Comptroller, and President of the Board of Supervisors, and then paid. What has since been so widely known as the *ad interim* Board of Audit was in this way constituted. The law in question was passed on the 26th day of April. Within ten days thereafter the Board of Audit met, and upon motion of Mayor Hall it was voted that the County Auditor should collect from the various committees of the Board of Supervisors all bills and liabilities incurred prior to April 26, 1870, with the amount due upon them. The Board then adjourned, nor did it ever meet again. The single session held was not of over five minutes' duration ; of course not a bill was audited by the members of it, as the law plainly required, but that whole duty was turned over to the County Auditor ; and the County Auditor was James Watson, who had crept into the City Hall out of Ludlow Street Jail. Watson knew well enough why the work was thus made over to him, for he was far too shrewd and keen not to appreciate the delicacies of his Honor the Mayor's situation, and not to see how expedient it was that he should know as little as possible of what was about to be done ; at the same time, having neither scruples nor a political future to embarrass his own action, he did his work with no less effective promptness than the members of the Board of Audit did theirs, — he passed all the bills in a lump, and then carried them round to each member of the Board for his signature. There was no meeting, no consultation, no investigation. No attention even was paid to the letter of the law. Properly every bill presented to the Board of Audit should have been passed upon by the Board of Supervisors, and it was presumed that this had been done. Such, however, was not the case, and, indeed, not a single one of the hundred and ninety bills thus presented had ever been before the Board of Supervisors at all. Tweed, as chairman of that Board, signed his name across the face of each bill, and Woodward's name as clerk followed below. At first the former certified, sometimes in substance and at other times in exact

and particular terms, that the bill was correct. Then even this form was omitted and Tweed's signature only was inscribed on the bills, until finally, when the last one was passed, he did not take the trouble to certify it at all, but, apparently, as it were, swallowed it whole, as it has not a word on it. Of the many claims presented some were unquestionably proper, as, for example, the very first of all, which covered a payment of \$5,000 to Judge Bedford on account of his salary. Those of the largest amounts, however, were wholly fraudulent, and in many cases were made out subsequently to the passage of the resolution by the Board of Audit, evidently manufactured for the express purpose of being paid under the authority of that Board. After the supposititious certifications of the Board of Supervisors had been affixed, the bills were sent to Watson, and a blank of the following tenor was attached : "City of New York, Department of Finance, Comptroller's Office, June 24, 1870. The undersigned, in pursuance of section 4, chapter 382, of the laws of 1870, certify that they have audited the annexed bill of ——, and have allowed the same at the sum of —— dollars." This blank should then have been signed by Hall, Connolly, and Tweed, in the order of their names as given. Actually, however, Tweed signed first, Connolly next, and Hall last,—Hall thus shielding himself from the duty of his position, by imposing a nominal responsibility on the members of the Board whose signatures were made to precede instead of following his own. A second blank was then attached, directing the County Auditor to draw a warrant for the claim, and the money was paid. This course of procedure went on through the months of May, June, July, and August, but the larger number of warrants were paid with commendable despatch on May 6, just nine days after the law authorizing this financial irregularity had passed. During these three and a half months the sum of \$6,312,000 was paid from the city treasury on the certificates of Tweed, Connolly, and Hall. Of this grand total, \$5,710,913 was paid on account of claims approved in favor of Ingersoll, Garvey, or Woodward. This sum was deposited as it was paid in the Broadway Bank, in the manner which has been described in a former article,—Garvey and Ingersoll accompanying Wood-

ward to the bank, where the latter drew the warrants, and at the same time deposited Tweed's percentage to his credit in that institution. This amounted to about sixteen per cent of the whole, or \$ 932,858.50. On one occasion the sum of \$ 384,000 was paid to the New York Printing Company, and upon the same day Tweed deposited to his own credit the check of the company for \$ 104,000. Upon another occasion Garvey was called before the members of the Board at an informal conference and asked how much money was required to settle his accounts. He stated that \$ 264,000 was necessary to complete the city work he had on hand; on the basis of this estimate \$ 1,500,000 was granted to him. The indefatigable researches of Mr. Tilden have very completely laid bare the system pursued in the division of the spoils. Tweed's share, as shown by a comparison of his and Woodward's bank-books, was twenty-four per cent of the whole. Woodward and Watson had each seven per cent. Peter B. Sweeny received ten per cent, while the remaining sixteen per cent went to parties as yet unknown. Here was a theft of sixty-five per cent of the whole in the bills first paid by the Board of Audit; this was subsequently improved upon, and no less than eighty-five per cent of the face-value of the later bills was fraudulent. The amount of Connolly's dividend is not exactly known; neither can it be ascertained whether any part of the proceeds found its way into Hall's possession; possibly he found his own account in the promise of future promotion. The language of Mr. James O'Brien, when testifying in Hall's first trial, is not without merit as expressing from the Ring point of view the opinions of an expert as to the considerations which probably affected the Mayor's action at this juncture. "It looks to me," said O'Brien, "that a man in Mr. Hall's position would not (have signed the warrants) without he would be patted on the back,—that he would be made governor, or that he would have some emoluments." If, however, Mr. Mayor Hall kept his hands pecuniarily clean, as much cannot be said of Mr. Chamberlain Sweeny. Ten per cent of the proceeds of the Board of Audit frauds were traced by Mr. Tilden to the account of James M. Sweeny, and it was further discovered that the latter subsequently invested a large part of

the proceeds in real estate in his brother Peter's name; while other payments were made to him by Ingersoll directly.

Before going further in the course of events which marked the progress of the Ring at this time, it may be well to pass very briefly in review the results of the administration of the several departments of the city government under the appointees of Mayor Hall. At the time it was the practice to assert that, though the Ring cost a great deal, it did a great deal; and, indeed, this tone of extenuation in regard to it has not wholly ceased to make itself heard even yet. It was concerning the Department of Public Parks, perhaps, that, as long as Mr. Sweeny was in power, the most extravagant laudations were heard. Indeed every unfavorable comment upon other features of city administration were always met by a reference to the brilliant results which had been achieved in the public parks. In reality the administration of this department exhibited in at least as marked a degree as any other the wide divergence which was uniformly found to exist between the promise and performance of the Ring. Great apparent activity and the spectacle of many laborers constantly employed caused many estimable persons, not peculiarly qualified to put the labors of the Park Commission at their true value, to conclude, not only that the work was well done, but that it was worth doing. This impression was studiously fostered through methods well understood, and Mr. Sands, late of the Citizens' Association, made himself useful by the preparation of numerous special articles, which, when published in the "Evening Post," exerted no little influence on public opinion.

The work on the Central Park had, ever since its inception in 1857, been under the control of a commission appointed by the governor. Under the city charter of 1870 the functions of this board were transferred to the Department of Public Parks, which was administered by four commissioners, Messrs. Sweeny, Hilton, Thomas C.—otherwise known as "Torpedo"—Fields, and Andrew H. Green, subsequently Connolly's successor in the office of Comptroller. The latter had been identified with the Central Park from its very beginning. The Ring did not care to incur the odium of his removal, so, after their wont when dealing with men whose names carried weight with

the community, they kept Mr. Green in office, but so arranged as to render him wholly powerless. This they accomplished with great ingenuity. The charter provided that Mr. Green should retain his former position as Controller of the Parks. The Mayor, however, appointed him Commissioner of Parks, while by the tax levy his salary as Controller was taken away ; and thus, as Mr. Green could not afford to administer the latter office for nothing, he was limited to his commissionership. Not content with this humiliating treatment, the other commissioners, who formed a majority of the board, resolved themselves into an executive committee, in whose hands the entire administration of the parks was vested, and thus reduced Mr. Green to a nullity. Sweeny was made president of the committee, and directed his associates with imperial sway and with results presently to be seen. The methods of procedure in familiar use in other fields of plunder were not less successfully adopted in the management of the parks. Vast sums, largely in excess of the amount allotted by law, were expended without adequate return and often on needless works. Many of the best and most experienced of the sub-officers of the Central Park were displaced by new and presumably by more submissive men. Messrs. Olmstead and Vaux, the well-known landscape architects, whose skill and taste had created a beautiful popular resort out of a veritable waste, were restrained in the performance of their duty or wholly ignored. No opportunity was offered them of meeting either the board or its executive committee ; while their written suggestions were contemptuously neglected.

The annual cost of maintaining the Central Park, previous to the accession of Mr. Sweeny and his associates, varied from \$ 250,000 to \$ 500,000. From 1861 to 1870 the average did not reach \$ 400,000 ; while during the four years prior to 1870 it had fallen to an average of just \$ 250,000. Under Sweeny's administration the outlay rose at once to \$ 555,345 in 1870. During 1871 a still more formidable advance was made. For that year the Board of Apportionment set aside \$ 186,000 for the maintenance of the Park. In point of fact Sweeny and his associates expended \$ 396,438 during the first ten months of the year alone. The same disregard of legal requirements

was shown in their expenditure on other accounts, as the lesser parks, museum, and observatory, resulting in a total of \$827,452. Consequently, after employing funds designed for other objects to meet their unwarranted outlay for the Central Park, there was still a deficit of over \$100,000, which had finally to be raised by a special loan, in order to balance their accounts ; and even under these circumstances they left behind them an astounding array of liabilities, including nearly \$500,000 for unpaid bills, such, for instance, as \$75,000 on laborers' pay-roll, besides numerous other obligations which, together with an additional \$500,000 or so incurred upon contracts in process of execution, involved in all an expenditure in excess of \$800,000. In fine, Messrs. Sweeny, Hilton, and Fields spent between April 20, 1870, and November 1, 1871, a total of \$6,000,000 ; they left behind them liabilities amounting to over \$1,500,000, and running contracts equivalent to at least an additional \$500,000 ; the net result being \$8,000,000 of the public money voted away in executive sessions by these critics of the "extravagance" of their predecessors ; yet those predecessors had spent a less sum than this during thirteen years for the whole cost of creating as well as maintaining the Central Park.

If Mr. Sweeny failed as an economist, still more lamentable in its results was his assumption of the rôle of a man of culture. There was a time when the changes were constantly rung upon his remarkable intellectual capacity, his fine scholarship, his wide reading, and his admirable taste. In practice, however, he gave small evidence of these qualities, but displayed rather the ignorance and blind prejudice natural to a ward politician. His treatment of Professor Waterhouse Hawkins was a noticeable case in point. This accomplished *savant* had been engaged by the former Park Commission to prepare plaster models of the skeletons of a number of extinct animals of America, upon the same plan as his well-known restorations at Sydenham Crystal Palace. He had been thus occupied for twenty-one months, and had prepared, at an outlay of some \$12,000, the skeletons of two colossal vertebrates, one the Hadrosaur, together with the preparatory sketches of other fossil animals. In the midst of these labors, Sweeny's

associate, Mr. Henry Hilton, a gentleman who, like Sweeny, claimed considerable culture, and who had once been a member of the New York judiciary, ordered Professor Hawkins to desist from his labors, and then caused his work to be broken up with sledge-hammers, carted away, "and buried." The fragments have since been dug up, but in a thousand pieces and utterly worthless. Not content with this act of vandalism, Mr. Hilton further directed that Professor Hawkins's moulds and sketch-models should also be destroyed; remarking in explanation to the amazed naturalist, that he should not bother himself about "dead animals," when there were so many living ones to care for. He also, in remote imitation of the famous Stratford restorer, caused a coat of white paint to be laid on the skeleton of a whale presented to the museum by Peter Cooper, and ordered a bronze statue to be similarly decorated. The Smithsonian Institution would gladly have purchased Professor Hawkins's restorations, but that was a matter of indifference to this iconoclastic and economically minded ex-judge, whose acts were fully sustained by Mr. Sweeny, who, in the report of the Park Commission, mentioned that a Paleontological Museum for the exhibition of animals "alleged to be of the pre-Adamite period" had been planned at an estimated cost of \$300,000, but this was deemed too great a sum to expend upon "a science which, however interesting, is yet so imperfect." Another argument urged against this scheme was that the building necessary to exhibit it would obstruct the view from dwellings in the vicinity, which would be a manifest injustice to their owners. It was therefore deemed advisable, the report stated, to abandon the project, and to fill in and cover up the foundations, which had already cost \$30,000. In referring to the Natural History Collection at the Central Park Museum, Mr. Sweeny made some classifications of animals rather calculated to astonish naturalists. One department, for instance, it was stated, was devoted to "Carnivora," and another to "the wolves and bears"; a distinction, as the "Times" afterwards suggested, probably based on the fondness of the latter for berries, which caused them to be classed by the erudite Sweeny with the Frugivora.

Turning from the Park to the Department of Public Works,

we find ourselves once more in Tweed's presence, and its administration was fully characteristic of him. He was its single member, and it is not necessary to describe his operations in detail. A few examples will suffice to illustrate his method. There were lately in existence ordinances framed at his instigation for paving scores of streets many miles in length. A number of these contracts were conferred upon one Guidet, who had a patent for a stone pavement which differed from the ordinary Belgian pavement only in being composed of smaller blocks cut in rectangular shapes instead of square. For this pavement Mr. Guidet invariably charged the city \$6 a square yard, though the cost of the Belgian pavement was but \$2.40. This same liberal contractor charged \$31,532 for making repairs in West Street, which experts have since estimated as worth \$11,640. A still more flagrant act of Tweed's was to contract for a sufficient quantity of Scotch sewer pipe to last two years, at double the cost of American pipe, though the former would have to be renewed every ten years, while the latter was guaranteed to last fifty. It is asserted that the contractors in this case were required to pay Tweed thirty-three per cent of the sum charged. In another instance, under a special law passed in 1870, Tweed began the extensive work of changing the structure of the Croton Aqueduct for an entire mile, from masonry to iron pipes. No contract was awarded, but the labor was performed by gangs of men employed directly by the Department of Public Works. The pay-rolls contained numerous sinecures. The law gave the commissioner unlimited power of expenditure, and he availed himself of it; during two years he spent over two millions of dollars upon the work, which should have been completed in far less time at half the cost.

In a previous article of this series * mention has been made of the fact that, notwithstanding the humiliating and pusillanimous conduct of the Board of Education in relation to their secretary, Mr. Boesé, it had been superseded by a new Board, appointed by Mayor Hall, and composed of willing satellites of the Ring. Among their number were Mr. Nathaniel Sands, late of the Citizens' Association; Loring Ingersoll, the partner

* No. CCXLVI., January, 1875, p. 153.

of Tweed's famous contractor ; Isaac Bell, William Wood, Magnus Gross, associate editor of the "Staats Zeitung," selected to please the German voters of New York, and as a compliment to Oswald Ottendorfer, who had recommended Hall as Mayor, Thomas Murphy, and others. Of the twelve commissioners nine held other offices under the Ring government. Sands was the active spirit of the Board. Notwithstanding an utter lack of literary training and an ungrammatical speech, this gentleman now essayed the rôle of an educational reformer, and in due time published an elaborate disquisition, supposed to be of his own composition, upon the subject of classical training, in which, with characteristic impudence, he bodily appropriated the views of Mill and Spencer.

At Sands' instigation a loud outcry was raised, through the press and elsewhere, at the shocking condition and extravagant cost of the public schools. He prepared an elaborate report, in which a number of reforms were suggested, while great pretence was made of cutting down the annual expenditure from \$3,150,000 to \$2,291,945. This agitation was, however, soon allowed to subside, and things took the usual course. During the two succeeding years no new school-houses were built to meet the requirements of the growing population of the city. During no year since the organization of the schools, in 1842, had the average attendance at them fallen below 83,000, and in 1868 it was 86,154 ; yet for the year ending October 1, 1870, the figures were 76,431, showing the surprising loss of ten thousand. At present the average attendance is 117,239. At the rate of growth during the years between 1865 and 1868, there should have been five thousand more pupils in 1870 instead of ten thousand less, so that the actual loss was no less than fifteen thousand, or sixteen per cent of the whole. In the budget of expenses a no less marked difference the other way was revealed. Instead of a saving of three fourths of a million, there was an increase in the annual outlay of some \$300,000 ; and this independent of a promised saving of \$400,000, from a decision of the Board not to erect any new school-buildings during the year.

It would, however, prove a wearisome reiteration to pass in review each of the different departments of the Ring govern-

ment. What is true of one is in a greater or less degree true of all. Everywhere loud professions of reform and promises of economy, followed by new and more ingenious devices of corruption and a wilder extravagance. Whether in projecting public improvements or in executing those projected by others,—whether in superintending the schools, in adorning or adding to the parks, or in caring for the poor, the sick, and the vicious,—the results of the Ring government were always open to criticism and rarely failed to merit severe censure. All work was badly performed, and much of it should never have been performed at all. Especially, also, is it worthy of note that the new and more respectable men appointed as heads of departments by Hall failed even more lamentably than their baser associates. They displayed a conspicuous unfitness for their positions, the result either of incapacity or of stupidity; while they were either too weak or too incompetent to thwart or even to materially obstruct the cunning practices of their less scrupulous fellow-laborers. This, however, was no unnatural result, as it could hardly have been anticipated that the wolves would wittingly invite the shepherd's dog into their councils. The movements, therefore, in favor of a "reform" representation had in them at times an element of emptiness which bordered closely on the ludicrous. For instance, in the summer of 1870, in response to a general demand made through the press for the Ring to place some leading citizens in the Board of Aldermen, a list was made up in Tweed's office which contained, side by side with seven members of the old and notoriously corrupt Common Council, the names of Oswald Ottendorfer, Moses Taylor, Royal Phelps, and Leonard W. Jerome. As was expected, all the candidates last named, with a single exception, declined the nominations tendered them, and that exception was Mr. Leonard W. Jerome. It would be difficult for the most kindly disposed to specify which of Mr. Jerome's antecedents had peculiarly indicated him as a probable worker in the field of political reform: he had been notorious during the war's high carnival at the Gold Board, he was closely connected with the turf, and not unknown at the Faro-table; but none of these fields of activity were identified, in the popular mind at least, with

lofty aspirations for an increased municipal integrity. In due time, however, Mr. Jerome was elected, in company with a number of other gentlemen, all of whom were vouched for as reliable ward and district "workers," and Coman was again chosen president of the Board. The critics of Ring government were thus silenced, while the control of affairs remained exactly where it had been before, notwithstanding the entrance of Mr. Jerome on an aldermanic career.

It is necessary, however, to return to the course of political events which succeeded the organization of the city government under the Ring charter. The passage of that charter in the spring of 1870 had worked the decisive overthrow of the Young Democracy, whose combination had been driven from the field of operations at Albany in a condition of apparently hopeless demoralization. O'Brien and his coadjutors were, however, not easily discouraged. They were young, they were unscrupulous, they were hungry; and accordingly it was not in defeat, nor in the treachery of confederates, nor the abandonment of allies, long to discourage them; destruction only would silence them, and that was not yet one of the regular conclusions of the game. So in the autumn of 1870 the Young Democracy began once more to give indications of a returning animation. As a faction, it no longer enjoyed the powerful assistance of the press. The "World" had now joined hands with the men against whom it had but recently, in the journalistic sense, declared "war to the knife"; and to this course it had been impelled, it was alleged, partly by the counsels of Mr. Tilden, who urged that in politics one must not cherish resentments, and partly by the urgency of those financially interested in its success, who deprecated an independence which entailed a pecuniary loss. Thenceforward that paper stood forth upon all occasions the unblushing defender of the Ring, and had no words but those of praise in which to speak of "those noted corruptionists," Hall and Tweed. Thereafter a large amount of corporation advertising crowded its depleted columns. The other newspaper champions of the Young Democracy either went over bodily to the enemy or became very lukewarm in their advocacy. Yet this apparent loss of support was counterbalanced by the adhesion of several fearless

and honorable men from within the ranks of the Democracy, who thereafter rendered invaluable services in the conflicts with the Ring. Hitherto the Young Democracy had been a mere faction in a more or less chaotic condition, but it now gradually assumed the shape of a united and disciplined opposition, scarcely inferior to the forces of the Ring as respects that party organization, the perfection of which had always been to the latter its great guaranty of success. This change was mainly due to the new-comers, who brought with them an ability and political experience far greater than that possessed by any of the former leaders of the Young Democracy. Foremost among these recruits was Henry L. Clinton, an able lawyer, who afterwards took an active share in the suits against Hall. During the ensuing contest with the Ring, Mr. Clinton spoke frequently, assailing their rule in the most trenchant language. Not content with denouncing the existing general corruption, he arraigned the individual acts of Hall, Sweeny, Tweed, and Connolly with great courage and mastery of the facts. These speeches have since been printed in pamphlet form, and they contain a valuable record of the contest for reform. Mr. Thomas Boesé, former clerk of the Board of Education, whose enforced resignation from that position has been fully detailed in an earlier paper of this series,* also gave much valuable counsel to the reformers, who were likewise aided by W. H. Wickham, subsequently Mayor of New York; Judge Barrett, A. R. Lawrence, and by other respectable Democrats. The operations of the Young Democracy under this new leadership soon acquired significance.

The ingenious device through which the majority of the Tammany sachems had, under Tweed's leadership, prevented a majority of the General Committee from holding a meeting in Tammany Hall, to test the relative strength of the two factions during the legislative struggle which preceded the passage of the charter, has already been described. Afterwards, these same sachems set the General Committee at defiance, and ordered new elections to be held in the wards represented by the members who opposed them. Indeed, not content with defeating the reformers by means of wholesale bribery at Albany, the

* No. CCXLVI. January, 1875, pp. 149 - 152.

Ring, adding insult to injury, sought to make them ridiculous. At the annual election of the Tammany sachems in the spring of 1870, though the reformed Democracy did not in any way seek to participate in it, it was announced through the papers that the latter had nominated a ticket upon which were the names of Messrs. Tilden, Marble, McLean, Hayes, Hogan, Schell, Green, Devlin, and S. L. M. Barlow, and this ticket was credited with only twenty-three votes out of a total of two hundred and sixty-five, thus conveying abroad the impression that these representatives of the reform movement were supported only by an insignificant minority of the party. This parting shot was not without its effect either, for even the "Times" ridiculed the reformers for this, supposed to be their last and most humiliating defeat. Through these various manœuvres the Ring sachems retained possession of Tammany Hall, and with it the prestige which results therefrom. The drift of their proceedings had evinced about the same disregard of right and of usage which might be imagined in case an English Ministry, finding itself supported by a minority only in Parliament, should refuse to resign, and having a technical right to occupy the hall of St. Stephen's, should forcibly exclude therefrom the opposition members, and order new elections for their seats. In view of these facts, the reformers very properly ignored the Tammany organization and proceeded to choose a new General Committee. This body then selected delegates to the forthcoming State Convention, who were instructed to demand recognition as the regular New York representatives, in place of the Tammany delegation. Henry L. Clinton was made chairman of this body, which comprised O'Brien, John Fox, Thomas Ledwith, William Walsh, James Hayes, Roswell D. Hatch, George McLean, Tweed's late superior in the Street Department, and thirty-three others.

The Democratic State Convention had been called to meet at Rochester on September 20, 1870. Most of the delegates were from the country districts, and of the same stamp as the senators and assemblymen whom Tweed had bribed by the wholesale at Albany. There were two contesting delegations from New York City, that representing the Young Democracy, just referred to, and the so-called regular Tammany Hall delegation,

headed by Peter B. Sweeny, who on this as on many like occasions proved to be a host in himself. It was on this occasion and to prevent interference with their plans, that the Ring hired and conveyed to Rochester a body-guard consisting of some hundreds of New York City ruffians and shoulder-hitters, who were appropriately called "Tweed's lambs." Free passes for this praetorian phalanx were supplied by the Erie managers, and its members demeaned themselves rather after the fashion of the stragglers of a raiding army than a peaceful political delegation. They took entire possession of the train in which they were carried, picked the pockets of and insulted the few respectable passengers upon it; fought indiscriminately with each other, and indulged in general drunken license; at every place on the road where the train stopped, they ransacked bar-rooms and stores, destroyed furniture, pillaged orchards and gardens, and plundered indiscriminately. Even those who had engaged their services, accustomed as they were to rough company, were alarmed at their depredations. Sweeny's brother-in-law, J. J. Bradley, Richard O'Gorman, and Judge "Mike" Connolly, all men of varied experience, deemed it prudent, in company with many other delegates, to leave the train and await another. Rumors of the exploits of these "lambs" reached the authorities of Rochester in advance of their arrival, and they became so alarmed for the safety of their city, in view of the letting loose in it at a late hour of the night of so many desperadoes, that they incontinently telegraphed to have the train delayed until daylight.

Meanwhile a preliminary meeting of the chief wirepullers of the party, including Mr. Tilden, was immediately held in Sweeny's rooms at the Osborne House, where, as a mere matter of form, the Ring programme was submitted for approval. The State Central Committee also had a secret session, at which it was decided that no one should be admitted to the floor of the Convention without a ticket. This decision soon became known, and Mr. Clinton at once applied to Mr. Tilden, as chairman of the State Central Committee, for tickets of admission for himself and his brother delegates of the Young Democracy. Mr. Tilden, however, deferred complying with this request until the next day, when he informed Mr. Clinton

that he had already issued tickets to the Tammany representatives, thus assuming that they were the regular delegation, but at the same time he politely offered spectators' tickets to the delegates of the Young Democracy. Naturally these were indignantly refused. By these adroit tactics Mr. Clinton and his associates were excluded from the floor of the Convention, and apparently it was supposed that they would thereupon attend as spectators in the gallery and attempt to take part in the proceedings without credentials, in which case their course would have been manifestly improper, and would have justified their forcible expulsion. In view of such a possible contingency, it is certainly a curious coincidence that five hundred tickets of admission, which had been placed in Mr. Tilden's room for safe-keeping, very mysteriously disappeared, and there is presumptive proof that they were distributed among "Tweed's lambs" to enable them to be on hand in case their services might be required. The representatives of the Young Democracy were, however, too worldly-wise to incur the risk of a physical contest under these conditions, and so they prudently kept aloof from the hall. The Convention was packed to overflowing, and a posse of twenty-five police officers supplemented the efforts of the presiding officer for the preservation of order. "Tweed's lambs" were no respecters of persons. It devolved upon Mr. Tilden, as chairman of the State Central Committee, to call the Convention to order; but while he was striving to make his way through the crowd, his watch was stolen from him by one of them who, on being afterwards arrested, jocosely remarked that he was a candidate for a United States revenue office, and had taken the watch with a view to making a suitable present, customary under such circumstances, to President Grant. The Mayor of Rochester also was robbed in the same manner. Undisturbed by this slight interruption, perhaps even not unconscious of a certain poetic justice in it, Mr. Tilden proceeded to deliver a long and elaborate address, in which he discreetly avoided any allusion to the questions immediately before the Convention, but devoted himself to denouncing in general terms the despoticisms of the Old World and to assailing centralism in the national government. He asserted the need of a return to the principles of the Constitution, and in doing

so stated many sound general truths of a more immediate application, of which he could not have been unconscious ; but he made no direct reference to the Ring. The worst comment which can be made upon his speech is, that it was received with cheers. Mr. Tilden concluded by nominating, as temporary chairman, William C. DeWitt, a Tammany office-holder from Brooklyn,—a nomination strenuously, but in vain, opposed by eight out of ten of the delegates from that city. This individual was selected with a special view to checking any efforts of the reformers to obtain a hearing in the Convention. The rules of procedure of the New York Assembly had been adopted, and these provided that any contesting member could present his credentials through a member whose seat was not contested, and have his claim referred to the proper committee. The Young Democracy at once sought to avail themselves of this provision ; and directly after the roll had been called, Mr. S. G. Mott rose and submitted their credentials and asked for the appointment of a committee to investigate them. The well-instructed chairman, however, wholly declined to take this view of the question, but, on the contrary, announced that he should not recognize any delegation from New York other than that already on the roll. It is needless to add that this impartial decision was greeted with applause by the partisans of the Ring.

The Young Democracy then abandoned the contest, and, having published a vigorous protest in the papers, returned to New York. The Convention thereupon proceeded with its business without fear of interruption, and, having nominated Hoffman for governor, triumphantly adjourned. A few days later the "Herald" very appropriately referred to the Convention as "the most out-and-out Tammany demonstration ever held in the State of New York," but, in common with the "World," it also insisted that the gang of ruffians who attended its deliberations were the hirelings of the Young Democracy. The "Leader," in its full report of the proceedings, made, however, absolutely no reference to Mr. Clinton and his associates, but contrasted the concord and paternal devotion to Democratic principles exhibited at Rochester, with the disorder shown at the contemporaneous Republican State

Convention at Saratoga. With infinite assurance, it asserted that the charge made by certain papers that the Convention had met simply to register the decrees of the Ring, was a poor attempt to make fun at the expense of the Democratic party, as there was really harmony and enthusiasm among the delegates in a very marked degree. Governor Hoffman also indulged in the pleasant doctrine of "harmony and enthusiasm" in the speech in which he accepted the renomination, though the real facts of the case could have been known by no one better than by himself. And so the Tammany delegation returned to New York in all the sanctity of "harmony and enthusiasm," duly escorted by their train of disciples of the new dispensation, who left behind them a trail of robbery and outrage which is still referred to with dismay by the people of the pleasant city of Rochester.

The struggle, however, was not yet over. The charter election was impending, and the members of the Ring were under the necessity of securing the re-election of Hall, whose term of office would shortly expire. The Young Democracy, whose opposition was stimulated by their late contemptuous treatment at Rochester, prepared to contest the mayoralty canvass with great energy. Their general committee met in convention and nominated a county ticket headed by Thomas Ledwith, a local politician of reputed integrity, and, what was of far greater moment, of unquestioned popularity, especially among the Roman Catholics, whose devoted friend he was. Elected to the State Legislature when only twenty-three years of age, he had had the independence to vote against some railroad project favored by Peter B. Sweeny, and had thereby incurred that individual's enmity. In spite of the latter's persistent opposition, however, Ledwith was twice chosen police justice. Though he was not a man whose election would have added lustre to the mayoralty, Ledwith could not have sunk the office in a deeper mire of disgrace than Hall, while he had the positive merit of being the candidate of those who most nearly represented the cause of honesty and decency. The rest of the ticket was made up of men of about the same calibre as Ledwith. The Ring naturally had no thought of any candidate but Hall, whose re-election was, indeed, absolutely essen-

tial to their existence ; for his defeat at this time must have, as is now well known, involved their destruction. Their consciousness of this fact was indicated by the large attendance at the nominating convention, which included Tweed, Sweeny, Belmont, Cardozo, Brennan, Isaac Bell, L. S. M. Barlow, Mr. Jerome, the new "respectable" alderman, Wilson G. Hunt, and others. Hall was renominated, in compliment, doubtless, to the Catholic interest, by the editor of the "Metropolitan Record," a leading Catholic journal, in a fulsome speech, wherein the shallow and versatile Mayor was placed on a par for legal ability and standing with Mr. O'Conor, while, as chief magistrate of the city, he was happily compared to the balance-wheel of a watch. He was further pronounced the synonym of official courtesy, while the public danger involved in the substitution of another candidate for him was pathetically set forth. As a matter of course, the nomination was carried unanimously. Speeches were made by different orators, the remarks most pertinent to the occasion being what the "Leader" called "a few golden sentences" from Tweed himself, in which he urged the assembled audience to "get home early and work industriously." And during the ensuing contest both the friends and opponents of the Ring showed that they had laid his injunction to heart.

While the Young Democracy held mass meetings at Apollo Hall, the Cooper Institute, and other places, at which Mr. Clinton and his associates vigorously denounced the Ring to large and enthusiastic audiences, the members of the Ring itself made skilful use of all their time-honored agencies for affecting public sentiment in their favor. Numerous mass meetings were held, at which the heart of the fierce city Democracy was duly fired ; but the most notable of these took place October 27, 1870, at Tammany Hall. On this occasion Tweed himself presided, and vigorously denounced the anticipated Federal interference in the election ; while speeches were also made by Ex-Governor Seymour, August Belmont, S. S. Cox, Messrs. Kerr, Thayer, Thomas C. Fields, Creamer, and Fernando Wood. The event of the evening, however, was the maiden speech of Mr. James Fisk, Jr., who, since the close union which had been formed between the Ring and the

Gould-Fisk Erie direction, was naturally looked upon as an ally of Tammany. When the meeting was nearly over and the strong appetite of the Democracy had become satiated, as it were, by the solid speeches of the evening, Fisk was recognized in the gallery, and, being enthusiastically called upon for his views on the political situation, he said briefly that the candidate whom he specially favored was Hoffman, and he meant to cast his first vote in New York State for him, he having previously voted in Massachusetts. This solicitude for Hoffman's re-election was further enforced by the instructions given to the Erie employees through a confidential agent of Fisk, in language of characteristic energy, "We don't care a damn about the rest of the ticket; you may paste off with the Republicans all the rest, but we must have Hoffman and the Legislature." As it approached its close the canvass waxed hotter and hotter. The assaults of the Young Democracy increased in vigor and effect, while the Ring in turn retorted through every form of vituperation. Their opponents were stigmatized as a mere faction. It was charged against the Young Democracy that they had formed a coalition with the Republicans; and that John Fox, their representative, was in league with the then collector, Mr. Thomas Murphy, and President Grant, who had promised large subscriptions of money to the Young Democracy in return for their aid in securing the defeat of Hoffman and carrying the State for the Republicans. With delightful inconsistency, the Ring, whose chief successes had always notoriously been gained by the corrupt aid of Republicans, now bitterly assailed this new alliance as "political treason," and only worthy of "renegades and deserters." Certain of the Young Democracy and their allies were subjected to unstinted personal abuse, for which, it must be confessed, good and sufficing pretexts were not far to seek. While the older men, like Judge Clerke, were harmlessly enough styled valedictinarians, and Mr. Clinton was contemptuously referred to as a criminal lawyer,—though that chanced also to be Hall's legitimate vocation,—Morrissey was with more effect stigmatized as a gambler and an ex-prize-fighter, and O'Brien was truthfully enough characterized as an ambitious and unscrupulous city demagogue.

The Ring did not, however, confine itself to this species of warfare ; indeed, it neglected no agency calculated to insure success. Among others it had recourse to the odor of respectability. At one of the Tammany Hall meetings, held during the canvass, a long list of vice-presidents was paraded, in which was included the names of Messrs. Tilden, Schell, L. S. M. Barlow, and others, who but a few short months before had been contemptuously credited with an insignificant vote upon the ballot for Tammany sachems. Rather a noticeable instance of self-stultification occurred during this canvass, which fixed the moral degradation of one who had previously stood comparatively high in the public esteem, in the case of Richard O'Gorman at a meeting of the Tammany General Committee, which was presided over by Tweed. This individual, a former prominent Fenian leader in Ireland, had in previous years vigorously denounced the Ring as a curse to New York. Virtue had in this case been the recipient of a substantial reward, for Mr. O'Gorman in due time received the nomination of Corporation Counsel from the Citizens' Association. This nomination, seconded by Tammany Hall, secured O'Gorman's election, and subsequently his firm allegiance to the Ring. His office was one of the most important in the city government ; and he bowed himself so entirely to the will of the Ring, that he was retained in it under the new charter, subject to removal by the Mayor. He thus became wholly dependent upon the Ring for his official and political existence ; and on the occasion referred to, he argued, with all the authority of the counsel of the corporation, that "no body or party can exist without a government,—call it a Ring if you will"; and he went on to add, that if a choice was necessary between the present Ring, "composed, if you will, of Mr. Tweed, Mr. Sweeny, and Mr. Hall," and one made up of members of the Young Democracy, he for one would stand by the old Ring, because he believed it had not only more honesty and character, but "more sagacity, more power, more intelligence, more political skill, and more promise of success than the other." The audacity of such a declaration was in keeping with the Ring's policy. Its members boldly took the bull by the horns, and discounted criticism, though they thus only postponed the impend-

ing settlement. More and more serious charges were brought against them, and in particular vigorous complaints now began to be heard in regard to the condition of the city finances.

The Comptroller's report is usually made in January ; but in 1870, Connolly, in defiance of law, neglected to publish any report of the operations of the preceding year until October, when at last he furnished what purported to be a statement of municipal expenditures during the preceding twenty-one months. In this document all suspicious items were grouped under the convenient heading "For General Purposes," which was made to include a total of no less than nine out of twenty-one millions of dollars. Meanwhile, it was known that the city valuation had doubled during the ten years between 1860 and 1870, while the annual assessment of taxes had, during the same period, more than doubled, rising from something less than ten millions to over \$23,000,000. Yet in spite of this enormous increase, the growth of the city debt had been most alarming ; and though its full extent was not known, this very ignorance gave to it a vague uncertainty which excited scarcely less apprehension than would have been caused by an avowal of the portentous truth.

In fact the debt which at the close of 1860 had amounted to a little less than \$19,000,000, at the close of 1870 exceeded \$73,000,000, and during the year 1870 alone \$25,000,000 had been added to it. Nor was there any mitigating circumstance to break the force of this discovery, once it became public ; for investigation, whatever direction it took, would only render it more alarming and more significant. It could not be urged that, during those years of increasing debt, the tax levy had not increased also, for it had risen from \$9,758,000 in 1860 to \$23,566,000 in 1870 ; neither could it be argued that these had been years of great prosperity during which the real increase of wealth had far exceeded the estimates of the assessors, so that the burden of taxation bore a less proportion to the wealth of the city in 1870 than it did in 1860 ; for in the first of these years the valuation amounted to \$700 to each inhabitant of the city, while in 1870 it had risen to over \$1,100. During the first forty years of the century the annual tax levy of New York

had averaged less than one half of one per cent on the valuation; not until 1846 did it reach one per cent, but in 1861 it exceeded two per cent, and in 1872 it was 2.25 per cent. So also as respects the average amount annually paid by each inhabitant; this test only confirmed the others. In 1840 the annual levy averaged only \$4.33 to an inhabitant; in 1850 it was but \$6.27; in 1860 it was \$11.99; while in 1870 it was \$25.11; yet in spite of this enormous increase of burden, the proportion of debt to the inhabitant had during these last ten years grown from \$23.21 to \$77.87. It may in fine be briefly said that during the five years between 1867 and 1871, inclusive, the average taxation of New York City had amounted to \$25 annually to each inhabitant, while the city debt had at the same time annually increased at the rate of \$12 to each inhabitant. In other words, the city revenue almost precisely met two thirds of the city's expenses.

In view of these unrevealed but dimly suspected facts it became obviously desirable, with an eye to the impending election, that the general feeling of distrust excited by the failure of the Comptroller to make his regular report should in some way be dissipated. The peculiar tactics of Mr. Sweeny were called into play to accomplish this result, which was brought about by what may well be regarded as his master-stroke of municipal strategy. At the request of Mr. Connolly, an informal committee of gentlemen, who were among the largest property-holders of New York, visited the Comptroller's office, and spent a few hours in a nominal examination of his accounts. This done, they issued a card in which, on the 5th of November, they publicly stated that "we have come to the conclusion, and certify, that the *financial affairs of the city under the charge of the Comptroller are administered in a correct and faithful manner.*" They then went on to state the amount of the city debt at \$48,644,487, and to convey to their fellow-citizens the cheering intelligence "that, at the rate at which the redemption of this debt has been provided for during the period of the office of the present Comptroller, the whole city debt as above *will be extinguished in less than twelve years.*" To this extraordinary document were appended the names of John Jacob Astor, Moses Taylor, Marshall O. Roberts, E. D.

Brown, Edward Schell, and George K. Sistere. Comment on such a performance is unnecessary. The signers of the certificate were guilty of perpetrating a fraud on their fellow-citizens. They were men of business,—they were men of property; as such they commanded the confidence of the property-holders of New York. They could not but have known perfectly well, when they signed the certificate of November 5, both the characters of those then in control of the city finances and the utter impossibility of effecting a thorough examination of so complicated a system of accounts during the time they had devoted to them. The whole transaction admits of but one explanation,—an explanation hardly less discreditable to the social condition then prevailing in New York than to those who thus permitted themselves to appear before the public as the accomplices of thieves,—the signers of that certificate believed that those then in control of the government of their city were secure in their power; they were themselves residents and tax-payers of New York, and they saw their account in standing well with those who decreed improvements and assessed taxes. One of their number, Mr. Marshall O. Roberts, has since publicly acknowledged his deep contrition for this disgraceful act, conceding that the certificate he then signed "was used as a cover and a shield by those who were robbing the city," and confessing that he took "much blame" to himself "for having so readily fallen into the trap," and that "he deeply regretted the consequences." The repentance, however, was somewhat tardy. The certificate for the moment accomplished all that the Ring anticipated from it, for the tax-payers of New York could not believe that men so astute and clear-headed in the management of their private affairs as Messrs. Astor, Taylor, and Roberts, would hold themselves forth as vouching for the public financial condition without at least having some acquaintance with that of which they professed to speak. It is not easy to leave the subject of this famous certificate without pausing for a moment to reflect on what were the probable sensations of those who profited most by the brilliant success of this master-stroke of policy. Tweed's boisterous merriment, Sweeny's saturnine satisfaction, and Connolly's sleek smile and oily contentment, can well be im-

agined as they chuckled over the skill and ease with which they had made the shrewdest and most wealthy citizens of New York their cat's-paws and accomplices. It is small matter for surprise that, after this brilliant stroke of policy, they thought themselves secure beyond peradventure in the possession of their power, and really believed that there was no limit to the frauds they might perpetrate and the antics they might play.

Another influence now also came into play, producing in itself a result almost decisive upon the contest for the mayoralty, — the transfer of the Catholic support from Ledwith to Hall. This defection was brought about through a bargain between the Ring and certain magnates of the church during the very week of the election, and under threats of cutting off supplies and promises of future aid. Upon the Sunday preceding the election it was announced, in some instances it was asserted even from the pulpit itself, that the Catholic vote was to be given to A. Oakey Hall for Mayor. This, of course, was the end of Ledwith's hopes, and it now only remained to record the results of an election quietly conducted, simultaneously with one for the election of the Lord Mayor of London.

There was but little repeating ; and the Ring ticket, both for State and city officers, was elected. Hoffman's majority was 49,000 over Woodford, while Hall received 70,000 votes to 46,270 cast for Ledwith. In spite of his support by the Young Democracy, the latter had only 10,000 more votes in New York City than were cast for Woodford, the Republican candidate for governor, which number the "Leader" claimed represented the whole of the strength of both the discontented and reforming elements. It then proceeded, in characteristic language, to sum up the results of the contest, declaring that Tammany Hall could not possibly be stronger than now : "The chronic sore-heads had been obliterated, the existing government remained intact ; a good Democratic delegation had been sent to Congress and to the Assembly, while the lawsuit against the Comptroller was killed." This last sentence referred to a claim, of which more will presently be heard, and which had been presented by Sheriff O'Brien against the city for some \$100,000 due him in fees.

It is now necessary, however, to refer to an apparently tri-

fling incident which was yet fraught with grave consequences to the Ring, and ultimately contributed largely to its downfall. In January, 1870, Sheriff O'Brien obtained from Connolly an appointment under the County Auditor for one of his henchmen, William S. Copeland, a seemingly inoffensive fellow and a skilful accountant, who performed his duties as assistant book-keeper to the satisfaction of his superiors. The Auditor's room was divided by high partitions, which effectually concealed Watson's private office from public observation. As a rule, Watson kept all vouchers belonging to bills against the city locked up in his own desk. Suspicion that matters in the Comptroller's office were not all right was first excited in Copeland's mind by noticing that certain vouchers which by accident came into his hands, though for unusually large amounts, were yet not sworn to as required by law. One in particular, for awnings, to the amount of \$18,000, so attracted his notice as to lead him to examine into other matters which seemed to call for some explanation. It happened shortly after that Copeland was directed to copy various accounts from a book called the Record of Vouchers, and while engaged upon it, he came to certain entries headed County Liabilities, when Mr. Lynes, his immediate superior, hastily interfered, with the remark that both Connolly and Watson would be very angry if they found that any one but himself transcribed this account. Considering who his sponsor was, it would have been most unnatural had not the already suspicious Copeland contrived to examine this forbidden record secretly. It contained enormous entries for payments made on account of plastering and furniture supplied to the city, none of the amounts of which were sworn to by the contractors, and which Copeland also knew from personal knowledge must be wrong. He became satisfied that the whole record was fraudulent, and with a pretty definite idea that the information might be valuable to himself or to his political friends, he transcribed the entire list of "County Liabilities." He told O'Brien of his discovery, and was advised to copy and preserve everything which indicated fraud. During the mayoralty election in the fall of 1870, which has just been referred to, O'Brien placed these figures confidentially in the hands of

Judge Barrett, and intended, in case of his own expected nomination as Mayor, to publish them as one of his campaign documents ; but when Ledwith was nominated, he abandoned this design, preferring probably to reserve his ammunition for future engagements, in the result of which he might have a more direct personal interest. Somewhat later in the year O'Brien, as a means of securing the settlement of the claim against the city recently referred to, and which the Ring refused to pay, threatened to publish these accounts in the "Times." Tweed and Connolly favored paying the claim, but this Sweeny bitterly opposed ; for, while Tweed frankly confessed that he had no stomach for another fight like that of the previous winter in the Legislature, Sweeny not unwisely insisted that O'Brien's greed was insatiable, and that an issue might as well be made with him then as at any other time. Accordingly it was finally announced to O'Brien by Tweed, at the latter's office, that Sweeny was implacable, and that his claims were not to be paid. O'Brien left the office angrily, and a by-stander, who was in the secret, remarked that he looked like a man who meant mischief.

That afternoon the members of the Ring had another and doubtless stormy consultation, as the result of which the morning's action was reconsidered, and it was at last agreed to send Watson to negotiate further with O'Brien. The former made an appointment to meet and confer with O'Brien at Bertholf's Hotel, a noted resort for sporting-men on Harlem Lane. O'Brien was accidentally detained, and Watson, not finding him at the appointed place, turned back, thinking to meet him on the road. The two passed each other unknowingly, and O'Brien drove to Bertholf's, where, learning that Watson had but just departed, he hastily sought to overtake him.* But he was too late. As Watson was passing in his sleigh at a rapid pace, through the narrow space in front of the St. Charles Hotel, another vehicle, driven, it is said, by a drunken Dutchman, turned into the street, the horses of which collided with the pair driven by Watson, one of which was killed by a blow of the shaft, while the other, rearing to escape the peril, turned and fell upon the sleigh to which he was attached, striking Watson on the forehead with his hoof. O'Brien ar-

rived on the spot a few moments after the accident, and saw the injured man taken into the hotel, and afterwards to his home in 42d Street. Watson was perfectly conscious, and able to walk up the steps of his house unaided. Indeed, at first, he seemed likely to recover, and for two or three days his condition improved, but congestion of the brain finally set in, resulting in his death. During the days of uncertainty, Watson's house was literally taken possession of by the members of the Ring and their agents, who kept constant watch at his bedside, superseding the services of his family, and alarming them by their mysterious and unceasing attendance. On the one hand it was feared that the injured man might make a death-bed confession, and reveal damaging secrets ; on the other hand, a large amount of property along the line of the Broadway widening, belonging partly to the Ring and partly to property-owners, whose awards on account of injury sustained were beyond their just dues, had been conveyed to Watson as representative of the Ring, and it was feared that, unless he made the necessary transfers before his death, the members of the Ring would not only lose their property, but that, upon the settlement of his estate, the existence of the other assignments would necessitate undesirable explanations. Watson, however, died and made no sign. The transfers of property were not executed, and his family reaped great benefit from the omission. To certain members of the Ring Watson's end was a great relief ; especially was this the case with Connolly, who, while his late County Auditor was passing away, seemed haunted by a strange fear, and now evinced his sense of relief by attending a public ball on the evening of his death.*

Indeed, the probabilities are very great that for a brief space after Watson's death, not only Connolly, but all his associates indulged in a fitful gleam of very considerable mental complacency. In fact, however, that event precipitated the crisis which had long been preparing, and which only expedients more and more desperate had thus far deferred. Had Watson lived, it is ex-

* Garvey, in one of his affidavits, says : "A day or two after said Watson's death, said Connolly, addressing me, said : 'I did a big day's work yesterday.' I inquired, in reply : 'Indeed, what was that ?' Said Connolly answered : 'I got hold of Watson's book containing the list of payments to us. I tell you, I soon put it out of the way.' "

tremely probable that some temporary truce would have been patched up between O'Brien and the Ring; for Watson, from his official position, appreciated, probably more than any one else, the extent and importance of the possible revelations which O'Brien might have it in his power to make; and he may too have suspected an amount of treachery among his subordinates even greater than really existed. His death, however, left Copeland's portentous transcript unbought in the hands of the most active and dangerous of the enemies of the Ring, and it now only remained to be seen what use he would make of it. For a time, nothing was publicly heard of it. Vague rumors of the existence of certain copies of municipal accounts, supposed to be fraudulent, had indeed crept abroad, and O'Brien was supposed to have more than a mere knowledge of their whereabouts. More than once, accordingly, efforts were made to induce him to consent to their publication. He, however, without denying the existence of the documents, declined to make them public, saying that he wished first to settle some other matters. The real fact, undoubtedly, was that he still hoped to drive a bargain satisfactory to himself with the Ring. Why he did not succeed in doing so is still a mystery; probably those resentments, the cherishing of which in politics was so much deprecated by Mr. Tilden, stood in the way. O'Brien hated Sweeny, and Sweeny detested O'Brien; and while Sweeny was vindictive and malignant, O'Brien was hot-tempered and revengeful. Undoubtedly the latter wished to be rich, and cared not a straw through what agencies he came by his wealth; but perhaps the desire to gratify his animosities, and to witness the destruction of those whom he hated, was stronger even than the desire for money. However this may be, weeks and months passed away, and still Copeland's fatal transcript of accounts lay in O'Brien's possession unpurchased by the Ring, and yet not revealed to the public. During the whole time negotiations in relation to it were dragging along, and O'Brien himself has asserted that so great was the solicitude of the Ring on the subject, that its members even proposed to admit him as a full partner in it as the price of his silence. This seems scarcely probable in itself; it is more reasonable to suppose that, as his sheriff's fees, which

were still rolling up against the city, were not paid, he became unable to endure the delay, and was ultimately compelled to bring matters to a climax.

Meanwhile the clouds were gathering more and more heavily over the heads of the now devoted Ring, and from out them not only did the thunder roll ominously, but now and again the lightning struck ; and it struck, too, in strange and unexpected quarters, dimly presaging the fury of the impending storm. This was well exemplified by the arraignment of David Dudley Field before the Bar Association at the very time the negotiations just referred to must have been pending. The formation of the Bar Association, in 1870, was the first practical movement towards a reform successfully carried out. It was, in fact, a protest on the part of the decency and respectability of the legal profession against the loathsome degradation into which since the introduction of the system of an elective judiciary, the bench of New York City had gradually and steadily fallen, and the evidences of which have already occupied their full share of space in the pages of this Review.* The degree to which the notorious deterioration of the bench had affected the *morale* of the bar has already been referred to in an earlier article of this series ; † but so far had this contagion spread, that, at the moment, the utterance did not seem wide of the truth, when, in referring to the selection by the Tammany organization of candidates for the judiciary in utter contempt and disregard of the views of the bar, the "Times" bitterly declared that "the Ring, in accomplishing this, had done what James II. or George III., the Roman mob or the French terrorists, could not do, — cowed the legal profession." Indeed, at that time, the attitude of the bar seemed to be one of abject submission at the feet of the thieves, blackguards, debauchees, and ruffians who controlled the municipal and Erie treasuries, and of their associates on the city bench. The influences which induced this apparently servile bar to rebel against the Ring judges, and to institute reform, were not far to seek.

* North American Review, Nos. CCXVI., July, 1867, pp. 148 - 176 ; CCXXIV., July, 1869, pp. 55 - 96 ; CCXXXI., April, 1871, pp. 241 - 291, 392 - 421 ; CCXLV., October, 1874, pp. 390 - 398.

† North American Review, No. CCXLV., October, 1874, p. 390.

Besides the indignation and disgust excited by the scandalous acts of Barnard and his associates, which were particularly felt by its younger members, the bar became alarmed at the effect which the condition of the courts began to have upon their clients, who were afraid to bring their cases there, and preferred rather to submit to pecuniary loss than to enter upon litigation.

This touched the lawyers in that most sensitive point, the pocket nerve ; and they began to question whether the perpetuation of the Ring judiciary was wholly compatible with a suitable future increase of their own professional emoluments. The older members of the profession, although disposed to be conservative and timid, became under this incentive somewhat bolder, though the Ring would never have had much to fear from them ; fortunately they had younger associates at the bar, the ardor of whose spirits had not been mollified by the seductive influence of an established name and practice, and whose contact and familiarity with pitch was likewise of a more recent date. As originally planned, also, the Bar Association was rather a professional club than a reformatory body, though even in that shape the Ring instinctively felt that it was an organization to be feared, and no little difficulty was encountered in securing a charter for it from the venal Legislature controlled by Tweed. When at last all steps preliminary to an organization had been effected, a call for a meeting was issued, one of the signers of which was David Dudley Field. That gentleman's intimate professional connection with many of the worst legal outrages which had marked the career of the infamous James Fisk, Jr., while in control of the Erie Railway, had attached to his name a most unfortunate notoriety. The presence of this name among the signers of a call supposed to be preparatory to a reform movement was, to say the least, unfortunate, and excited comments indicative rather of incredulity and disgust than of sanguine faith. It has been stated that the name of Mr. Field was to have been excluded in forming the new association, and it would certainly have been well for him had it been so from the commencement ; but, as it was, no public objection was made to his becoming a member of it. When, however, a list of officers was selected, Mr. Field's name, considering his age and professional prominence, was

conspicuous for its absence ; and when the meeting to organize the Association was held, Mr. Field was the only notable absentee. A complete organization was, however, effected, and a large building in 27th Street was leased for the use of the Association, which soon became an habitual gathering-place for its members. Then speedily ensued a singular episode, illustrating the curiously electric condition, so to speak, of the moral atmosphere,— a condition in which any accidental line or word might serve as a conductor to draw down the charge. Toward the close of December there appeared in the Springfield, Mass., "Republican," a letter from a correspondent in New York City, which contained a brief paragraph referring to Mr. Field, and to the injury which his reputation had sustained through his connection with Fisk and Barnard in the Erie litigations. This paragraph, having been copied in the New York "Times," was read by Mr. Field, who saw fit to be both sensitive and indignant, and he at once wrote to the editor of the "Republican" denouncing the paragraph as "scurrilous," and demanding from him a public disavowal of it. This the editor declined to make, and a heated and, toward the close, very personal correspondence then followed between the editor, Mr. Bowles, on the one side, and Mr. Field and his son Dudley upon the other,— upon the question whether a lawyer may or may not, without discrimination and responsibility, undertake any cause which may be offered to him, and whether Mr. Field, by acting as the advocate of Fisk and Gould, had rendered himself amenable to public criticism. The correspondence was a lengthy one, and was subsequently printed in pamphlet form. The general verdict upon the controversy was, that while Mr. Bowles's logic was sound, it lacked sustaining facts. His side of the case, however, soon gained a more formidable champion in the person of General F. C. Barlow, who, after having evidently chafed in hardly suppressed indignation over the revolting condition of affairs with which he found himself surrounded, now sprang into the arena. A series of letters appeared from him in the "Tribune" in rapid succession, in which Mr. Field's relations with Fisk and Barnard were revealed with startling clearness, and an abundance of evidence was adduced to more than justify Mr.

Bowles's claim that those relations laid Mr. Field open to the severest criticism.

At the close of his letters in the "Tribune," General Barlow announced that he should immediately present charges of impeachment against Mr. Field before the Bar Association; and by this act, thus early and in spite of itself, he forced that Association into prominence in the struggle for reform. Until the date of the Field-Bowles correspondence, no question had come before the Association involving the professional character of any of its members. At its monthly meeting immediately subsequent to it, there had been a large attendance of members, to ratify the by-laws reported by the Committee on Grievances, which directed how trials of members should be conducted. Mr. Field, as if anticipating the effect of his tilt with Mr. Bowles, was present, and made strenuous efforts to amend the by-laws, so that any one having charges brought against him should have the right to "challenge for favor" any or all of the members whom he deemed prejudiced, and to have their places filled by more suitable persons. This proposition, however, was voted down unanimously, and the only amendment made to the by-laws was that three out of ten of the committee might be challenged for favor, and the other seven could then fill their places from the Association at large. Several other propositions made by Mr. Field were also lost, and the sentiment of the meeting was evidently strongly against him:

Under these circumstances General Barlow presented his charges, which were at once referred to the Committee on Grievances. It thus seemed probable that they would receive prompt consideration, and strong hopes even were entertained by the younger and more sanguine members of Mr. Field's expulsion from the Association. Things were not, however, as yet ripe for such a result as this, and the counsels of those who preached moderation in the warfare against indecency speedily made themselves felt. Delays ensued, and for a long time the committee kept the whole matter in a state of suspense. Finally they reported, and evaded the issue by the trick of a pettifogger, which, if it had not delighted Mr. Field, would have driven him to the verge of self-destruction; they

took the ground that, as the acts relative to which the charges against him had been made occurred prior to his admission as a member, it would be improper for the Association to take cognizance of them.

This perfectly contemptible and universally unsatisfactory conclusion served only to disgust the bar and to make the outside public laugh. Here was indeed a generous outcome for the first and much-vaunted practical movement in the direction of reform! Yet to those who closely watched the indications of the times this episode was deeply significant in many respects. The great interest and wide-spread attention it excited showed that public opinion was now thoroughly roused. It was made apparent that no man who at all valued his reputation could for an instant afford to allow himself to be associated in the public mind with either the Ring or its satellites. Above all, to those who, having eyes, chose to see, it indicated in a way not to be misunderstood that the hour of ripeness was at hand.

Indeed, it would have been strange if public opinion in New York City had not been thoroughly aroused during the first six months of 1870; for rarely during any times, except those of war, has it been anywhere more persistently worked upon or by more potent and skilful agencies. Almost simultaneously with the inception of the Bar Association, the New York "Times" and "Harper's Weekly" had begun to assail the Ring with a vigor and courage in refreshing contrast with the subservient tone which marked the utterances of the city press as a whole. It will be remembered that the first of Nast's memorable cartoon caricatures of the Ring had appeared during the contest in the School Board, described in the preceding article of this series. At the instigation of Sands, the Ring had then retaliated by excluding the Harpers' publications from the school supplies. This naturally, however, only led to bolder and more telling attacks, and the whole weight of Nast's pencil, enforced by Curtis's pen, was turned with telling effect upon the municipal authorities. In his own way Thomas Nast is unquestionably a genius; and now, in this struggle with the Ring, his good fortune had brought him in contact with exactly the conditions necessary to bring all his powers into their fullest play. The cartoons which he poured

forth in the pages of "Harper's Weekly" during the year 1870 mark accordingly a veritable epoch in the history of political caricature, for he elevated it into a deadly weapon of political warfare. The very vulgarity and coarseness which surrounded his victims, and, being inherent in their natures, shone through their visages, was something of which he had a peculiar perception and which he delighted to portray. They were birds—jail-birds — whom the fowler delighted to follow; and at every shot he brought them down. No one appreciated more than Tweed himself the terrible cleverness of these portrayals, and he characteristically said, "I don't care a straw for your newspaper articles; my constituents don't know how to read, but they can't help seeing them damned pictures." But Nast did not confine his attentions to Tweed; he also seemed to specially enjoy depicting Oakey Hall in the most ludicrous aspects, and this was, indeed, a sore affliction to the latter's vanity. The public at large, however, keenly relished these humorous displays, and every newsdealer's window and stand was crowded by throngs of amused observers as often as "Harper's Weekly" appeared.

The line of attack pursued by the "Times," though very different from this, was scarcely less effective. After the passage of the new charter, that paper, deceived by the hope so generally entertained at the time that Tweed and Sweeny meant to institute veritable reforms in the municipal government, had lent a quasi support to the Ring. Late in the summer of 1870, however, a change took place in its management, and Mr. Louis J. Jennings, an Englishman by birth, who had at one time been an editorial writer on the staff of the London "Times," and more recently the American correspondent of that paper, became its responsible head. His sympathies had been decidedly with the Young Democracy, and he felt that no faith was to be placed in the Ring's professions. In a very short time the tone of the paper was changed from nominal praise to the most savage criticism. It has been charged that this conversion was due to selfish considerations, and that it was on account of a disputed bill for city advertising that the "Times" began to attack the Ring. The facts, however, do not bear out this charge. A list of papers which received

a share of the corporation advertising was given in the second article of this series, and it there appeared that, among them all, the smallest amount was received by the "Times." From 1860 to 1870 a total of \$94,715, was paid to that journal on this account, or a yearly average of \$9,471,—an insignificant sum in comparison with the hundreds of thousands of money which were squandered on such unknown sheets as the "Star," the "News," and the "Democrat"; and but a trifling item also in the entire revenue of a great New York City daily. Long before the change in its course took place, moreover, the publisher of the "Times" had ordered that no city advertisements should be received unless paid for over the counter,—which was equivalent to a virtual interdict.

Having, however, begun the attack from whatever cause, the "Times" did not thereafter falter. Its editor was a man aggressive by nature, and in the contest he had now undertaken he availed himself of all the resources at his command. The abundant literature of journalism can hardly supply more vigorous or more incisive writing than that of the leading articles of the "Times" during this contest. And it was a contest against fearful odds. Not only was the Ring securely entrenched with all the powers of the judiciary, the Legislature, and the police at its command, but the other New York City journals, instead of supporting the attack, either deprecated its "violence" or declared that it was due to interested motives. The public, too, seemed deaf to all appeals and indifferent to charges of corruption. Under such circumstances, the boldest might well have despaired; but neither indifference nor slander nor apathy nor cajolery nor intimidation could affect the "Times" and its conductors. Day after day, in strong words backed by incontrovertible facts, it reiterated its assertions that Tweed, Sweeny, Hall, and Connolly were conspirators, and that they had been guilty of manifold crimes and of great abuse of power. It began by showing the degradation of the judiciary, and exposed the secrets of the famous Room 13. It denounced Connolly for withholding his report on the city finances, and with much plainness of speech discussed the relations of D. D. Field with the Erie Railway. The climax was, however, reached when, with praiseworthy directness, it pro-

nounced Tweed a "THIEF," and, emphasizing the significance of that word by the use of the largest of capitals, defied him to deny the accusation.

The effect of this outspoken course was soon apparent. Hall wrote a whining letter to the publisher of the "Times," begging exemption from personal attacks, on the plea of old personal friendship and former connection with the paper. Mr. Jones replied that for A. Oakey Hall he had no criticism, but the Mayor of New York must be responsible for and bear the odium of his official acts. Connolly made like advances and in a highly characteristic manner. Three times he sought an interview with Mr. Jones at his house. The first time he turned back. The second time, after ringing the bell, he sneaked away before the door was opened; and, having mustered up courage for a third venture, he this time was informed that Mr. Jones was out. He then requested an interview with the latter in his counsel's office, and there, with much emotion, offered great sums of money if the "Times" would cease its clamor. "For God's sake, try and stop these attacks! You can have anything you want. If five millions are needed, you shall have it in five minutes." Mr. Jones refused even to consider his proposition, and at once left the room. Similar advances were made to Mr. Jennings as well as to Mr. Nast. Both were offered wellnigh unlimited sums of money if they would but agree to leave New York and go abroad. Ingersoll, with that odd familiarity of address in which the Ring delighted, is reported to have one day said to the latter: "Tommy, if you will take a trip to Europe for a year, you can have your expenses paid, and a new house will be built ready for your return, without your paying a cent for it." Both artist and editor, however, were obdurate, and declined the tempting offers.

Then intimidation was tried. The publisher of the "Times" was "shadowed" for a fortnight, and a repetition of the terrible experience of Dorman B. Eaton seemed impending over him. Next Tweed threatened to buy up Mr. Raymond's stock and thus obtain a controlling interest in the paper. This attempt failed of success by only a half-hour's time; negotiations were actually in progress with Mr. Raymond's widow to buy

her shares, when Mr. Jones made a higher bid and obtained them. Then the judicial machinery was set in motion, and Barnard threatened the "Times" with all the terrors of the law, and its publisher was brought before the grand jury for libelling Mayor Hall. Hall then announced that a flaw had been discovered in the title of the real estate occupied by the "Times," which would enable the city authorities to place a receiver in possession of the Times Building. But the obdurate journal showed itself as deaf to hard words as it had before been to soft, and threats had no more influence upon it than blandishments.

These events took place mainly during the latter part of 1870, and it was under the severe stress put upon it by the "Times" criticisms, and as an offset to them, that the "white-washing committee"—as Messrs. Astor, Taylor, Roberts, and their associates were not inaptly described—was devised and induced to report. That ingenious counter-move temporarily accomplished all that was expected of it, and the "Times" seemed to have achieved nothing more than to secure for itself the reputation of being a common scold. In November of that year, however, shortly after the charter elections, information was sent to it of the existence of Copeland's transcript of the Court House accounts, though, for the reasons which have already been stated, O'Brien would not as yet consent to their publication. The knowledge that proofs of great frauds were in existence strengthened, nevertheless, the hands of the paper, and stimulated its conductors to renewed efforts. While matters were thus drawing toward a climax in this direction, additional assistance came from another quarter. Mr. Dexter A. Hawkins, of the Council of Political Reform, an organization intended to do what the Citizens' Association had failed to accomplish, prepared a report upon the city finances, in which he demonstrated that the certificate of "the white washing committee" of November, 1870, was grossly incorrect, and that, as has since been made very evident, the debt of New York had increased, and then was increasing, so enormously as to threaten a not remote bankruptcy. This report was based upon data obtained only by untiring labor and persistence on the part of Mr. Hawkins, undeterred by the obstacles which every member of the Ring, especially Hall and Connolly, threw

in his way. Indeed, it was not until the Comptroller's Report appeared, in June, 1871, that Mr. Hawkins was able to complete his exhibit, which he proposed to the "Times" to publish upon the day following its presentation, June 30. This was done, and the statistics thus presented made a profound impression, especially in financial circles. A few days afterward an associate of Copeland's, named O'Rouke, who had charge of the Comptroller's accounts relating to the city armories, called on Mr. Hawkins, and was sent by him with a note of introduction to the editor of the "Times," and employed by the latter to prepare an exposé of the frauds in the armories for publication. Following close after the Hawkins statement this revelation also produced its effect, though far less than it otherwise would have, had it not happened to appear on the very eve of the Orange riots of July 12, which for a time monopolized public attention.

It was at this time, and before the traces of the excitement incident to the riots had yet wholly died away, that, for reasons not fully understood, O'Brien offered the Copeland transcripts to the "Sun." Mr. Dana, the editor of that journal, happened, however, to be absent beyond reach even of the telegraph, and his managing editor declined to take the responsibility of publishing them.

Then it was, at last, that finally, on July 18, O'Brien hastily entered the "Times" office, and, handing to Mr. Jones a bundle of documents, said, "There are all the figures: you can do with them just what you please." He did not wait to make further explanations, and, without even sitting down, departed.

The accounts were found to be in a state unfit for immediate publication, and it required much labor to put them in a comprehensible form. No time was lost, however, and the next day it was editorially announced that they would be published on the 20th. Their importance and probable effect upon the public were very distinctly set forth; and it is a curious fact, that, during that and the succeeding days, many persons called at the office of the "Times" to remonstrate against their publication, in view of the disastrous consequences which they apprehended must ensue from it.

Indeed, it is not too much to say, that rarely has the publi-

cation of any paper been looked forward to with so much curiosity and expectation. At last, the truth was to be revealed. For months and months charges and epithets had been bandied to and fro, until the generality had ceased to credit anything ; but here facts were promised, and now the world would know. And it did know. On the 20th, the day announced, part of the accounts were published, in prominent type and position. They were continued in successive issues until the 29th, when a grand exhibit was made in a supplement printed in German as well as English, and filling in all twenty-eight columns of the "Times." The figures required no explanation. They told their own story,—a story the significance of which was clear to the meanest intelligence. Millions of public money had been squandered, without any resulting benefit to the public ; millions had been stolen, and by whom was now apparent. Nast's graphic pencil had already made the dwellers in every nook and corner of the land familiar with the features and bearing of the now detected thieves.

CHARLES F. WINGATE.

- ART. V.—1. *Studies in the History of the Renaissance.* By WALTER H. PATER, Fellow of Brasenose College, Oxford. London : Macmillan & Co. 1873.
2. *De l'Art Chrétien.* Par A. F. RIO. Nouvelle édition. Paris : L. Hachette ; Fribourg-en-Brisgau : M. B. Herder. 1870.
3. *Cultur der Renaissance in Italien.* JACOB BURCKHARDT. Leipzig : E. A. Seeman. 1869.

THESE are the titles of three books which present the same subject, but with totally different results as to the impression produced upon the reader. One of them puts it before us as if it were the only good way, yet too good for most people ; another, in a spirit of hostility and detraction ; the third, with an excellent breadth of fairness and judicious appreciation. As the authors all three come forward with high pretensions to qualification as instructors, it may be worth while to inquire somewhat at length into the intrinsic value of their instructions, as well as into their method of treating the theme which they have chosen.

Since Mr. Ruskin set the example of a literary man erecting himself into a dictator on questions of art, we have been subjected to fearful tyranny in æsthetics. It is true that no one else has carried matters so far nor with so high a hand, but there are innumerable petty despots laying down the laws of the sublime and beautiful, who only lack the ability to be as peremptory, as arbitrary, and as paradoxical as he. A ready pen is a sad snare ; he who wields it wishes to write upon every subject, whether he knows anything about it or not. Even with the French, who possess the birthright of natural appreciation in regard to art and taste, who have excellent traditions and the Louvre as a training school,—even with them the *littérateur* sometimes overtops the *connoisseur*, when a man of letters undertakes art-criticism. But general culture so inevitably develops the æsthetic faculty in a Frenchman, that he is in no danger of wandering far out of the way, still less of leading others astray ; he has a nation of critics to bring him to his bearings. Moreover, no Frenchman would venture to enforce his assertions with no other authority than, " You must believe what I tell you because I tell you so," and he would only be laughed at if he did ; there are no autocrats of criticism in France, no critics by divine right. But with us poor barbarians, American and English, it is otherwise. Few of us have this inborn perception of beauty and fitness which belong to the Latin races ; and when a man appears possessing the precious gift, should he arrogate supernatural powers to himself, he will not find many to deny his authority or dispute his claim. On the contrary, his wildest and weakest words will be received as inspired, and reverentially quoted by his followers until the mischief spreads and we have a new sect of fanatics ready to proceed to extremes with unbelievers. We think we recognize in Mr. Pater, whose work heads this article, one of the new Mahomets, although he has not yet bared his scimitar and proclaimed himself monarch as well as prophet. He lacks two capital qualifications for such a mission,—originality and earnestness ; yet he has already votaries, and, seeking for the secret of his influence, we are inclined to think that it lies primarily in the subjects of which he treats, names and themes which are incantations in themselves, whose very

sound possesses a magic which nothing can dispel ; secondly, in his treatment of them, and this is a snare. He has the peculiar eloquence which goes with insobriety of style, and all the charm and force which can be snatched by breaking rules. Still, the effects of this lawlessness are by no means always happy. The spell would also be more potent for many readers, if the author were not so palpably intoxicated by it himself ; sometimes his ear seems to be tickled by a single word, which he repeats in every imaginable combination ; thus we have "comely clerks," "comely decadence," "comely gestures," "comely divinities," "comely ways of conceiving life" ; then it is "sweetness," *ad nauseam* ; sometimes a whole phrase repeated verbatim, like the burden of a ballad. Now this trick of iteration may be pardoned in an old gentleman like Mr. Carlyle, but it certainly suggests dotage. He coins like a true despot, and uses words without italics which are not English, such as "débris" and "cult," — to whatever language that may belong, — and gives us such parts of speech as "siderealized." And why does he talk about Pico della Mirandula, whom all modern Europe knows as Mirandola ? This is mere affectation ; but when he speaks of the Pitti Palace and the Sistine Chapel as "the Pitti" and "the Sistine," it is a bad habit, and has a taint of vulgarity. A graver fault than these is his inaccuracy ; for instance, in support of a theory he alleges that the Greek goddesses were always childless ; he cannot be ignorant of the beautiful Juno suckling a babe in the Pio Clementino Museum of the Vatican, not to speak of the common subject of Venus and Cupid. Elsewhere there is a trifling detail which strongly marks his preference for effect over exactness ; he gives a minute and poetical description of Raphael's great frescos known as the Debate on the Sacrament and Parnassus, speaking of them as companion pieces designed to illustrate respectively orthodoxy of doctrine and orthodoxy of taste. Now these compositions are in no sense whatever companions ; they differ in shape, size, and position ; if the *Disputa* have a companion, it is the famous School of Athens.

To pass to the more agreeable task of pointing out merits, Mr. Pater has a most unusual gift of conveying half-defined

emotions, modulations of feeling, shades of thought ; rare fineness of perception, and aerial grace and delicacy of touch ; an exquisite felicity of epithet, of description, of presenting lovely images to the mind ; his prose is sometimes as fraught with the unspeakable as music itself, although never with the highest rapture ; in these twin talents of calling up the seen and the unseen must lie much of his fascination. A more tangible quality, though one seldom brought into service, is his power of giving to his theories — and some few of those about art are perfectly sound — the clearness of chiselled marble. It is true that they are mainly borrowed, but he makes good use of them occasionally. An example of this is his remarks on the proper limits of sculpture (p. 188), or a still finer passage concerning the influence of external conditions on religion (p. 171) : “ Greek art, when we first catch sight of it, is entangled with Greek religion. We are accustomed to think of Greek religion as the religion of art and beauty, the religion of which the Olympian Zeus and the Athena Pallas are the idols, the poems of Homer the sacred books. . . . Yet such a view is only a partial one ; in it the eye is fixed on the sharp, bright edge of high Hellenic culture, but loses sight of the sombre world across which it strikes. . . . Religions, as they grow by natural laws out of man’s life, are modified by whatever modifies his life. They brighten under a bright sky, they become liberal as the social range widens, they grow intense and shrill in the clefts of human life where the spirit is narrow and confined, and the stars are visible at noonday ; and a fine analysis of these differences is one of the gravest functions of religious criticism.”

Having called attention to these beauties, of which the above are by no means the only examples, there is no help for it but to go back to fault-finding. The volume is a collection of essays chiefly on matters of art in one form or another. It is curious that having much of the dogmatism, inaccuracy, fancifulness, love of paradox, and arbitrariness of Ruskin, Mr. Pater’s purpose should be the glorification of that period or movement, as one may consider it, which has called forth the former’s most eloquent denunciations. Movement we must say, since our author removes the landmarks and limits of his

subject so completely as to leave no means of bounding it. Thus we have a quarrel with him at the outset, for we deny the right to wrest a term of long-established and universally accepted significance from its conventional meaning and give it a wider, perhaps a broader, but at the same time a looser and less accurate application, so that it ceases to be the aid that all such general terms are meant to be. The word Renaissance has been used technically to express an epoch, a fact, an intellectual phase, and a social condition. To use it as Mr. Pater does is as though a writer on ecclesiastical history should persist in including in the term Reformation the Albigenses, Waldenses, iconoclast emperors, or whatever resistance to hierarchical authority has arisen in Christendom from apostolic days down ; or as though the historian of England should begin the Revolution with the meeting at Runnymede, or the downfall of Ethelred the Unready. The review of this movement leads Mr. Pater to touch upon some of the gravest pre-occupations of the human mind ; he always does so with the air of one who is trifling with his subject ; there is no earnestness in his manner ; he never goes to the root of the question, he never sounds the soul of the inquirer ; he talks about "religions," but he knows nothing of religion ; fallacies bloom about his path ; he never forgets that he is a *dilettante* ; he shrinks from no assertion however unfounded, and has no hesitation in contradicting himself a few pages later. In his preface he says that, to the critic, "all periods, types, schools of taste, are in themselves equal. . . . 'The ages are all equal,' says William Blake, 'but genius is always above its age.'" This is very well for Blake, the *pictor ignotus* ; but the ages have been notoriously unequal, or why do we hear of the age of Pericles, the Augustan age, the *Cinquecento*, the Elizabethan era, the *Grand Siècle*? And genius is not above its age, but above its fellow-men, for to the heirs of immortal fame posterity has seldom done more than confirm the verdict of their own century. And are we to believe that Mr. Pater really esteems the school of taste which produced Mansard and Lemercier equal to that which brought forth Arnolfo and the Pisani ? His definition of the critic's function, to discern and detach from the mass of an author's works the pure ore, the

fine crystals of his genius, which make its intrinsic and distinctive value, is true and well put ; but what are we to think of his own critical capacity when in that very passage he classes Byron with Goethe as artist or workman ?

The first example given of that revival of classic feeling which common consent has assigned to the fifteenth and sixteenth centuries, but which Mr. Pater wishes to trace back to the dark ages, is a poetical story in Provençal of the latter half of the thirteenth century, or even later ; there is no proof extant of an older derivation, and at that time Dante had come, besides the constellation of lesser lights who preceded him, whom Mr. D. G. Rossetti has made known to us. This date is the fact ; the shadowy possibilities of an earlier origin are not sufficient to make this story serve as proof of a return towards Hellenism in the eleventh century ; moreover those very possibilities indicate, not a Greek, but an Arabic source. Mr. Pater gives no complete or consecutive account of this tale or the literature of which it is a sample ; we are not told the story ; the selections are few and scanty, though so full of beauty, grace, and quaintness as to make us long for more ; his method throughout is like humming bits of a tune to one's self. Reduce chapter first to its substance and what remains is about this : that in a certain book there is a story which Mr. Pater thinks very pretty, and which confirms, to his mind, certain notions of his own. For a clear conception of either the story or the subject which it illustrates we must look for it in M. Fauriel's History of Provençal Poetry.

From the thirteenth century Mr. Pater leaps lightly into the fifteenth, where his first point is : "The attempt made by certain Italian scholars to reconcile Christianity with the religion of ancient Greece." It may be doubted whether they did so seriously and in good faith. The men who carried the parallel furthest really cared for myth more than for truth ; the best Christians among the humanists did not bother themselves with such amalgamation, but kept their religion and their philosophy in different phials. Pico della Mirandola, whom Mr. Pater selects as the type of these experimentalists, was of an earnest and ardent nature, and less interested in any one form of human belief than in a general scheme which should

include all that men had known and learned,—the science and wisdom of the obsolete scholiasts, of the Arabic and Jewish teachers, as well as of the heathen sages. The impression left by Mr. Pater's description of Pico, a youth of the most extraordinary endowments and erudition even in that age of prodigies, is of something between a wax-figure and a sleep-walker; a single sentence of his own gives us at once more sense of reality and a more ideal conception of him: “‘In the midst of the world have I placed thee,’ says the Creator, ‘that thou mayest the better survey it and all that it contains. I have made thee a creature neither all heavenly nor all earthly, neither purely immortal nor mortal, that thou mayest shape and subdue thyself unhindered; thou canst degrade thyself to a beast and regenerate thyself to a godlike being. The brutes bring with them from the womb what is to be theirs; the higher spirits are from the beginning what they are to remain throughout eternity. Thou alone hast development, a power of voluntary growth; thou hast within thee the germs of universal life.’”

“The fifteenth century was an impassioned age,” proceeds Mr. Pater, “so ardent and serious in its pursuit of art that it consecrated everything with which art had to do, as a religious object. . . . It was too serious to play with a religion.” This is far from true; it better describes the general temper of the previous century; there was an intense and impassioned strain in the fifteenth which found expression in many ways, but the age was willing to play with its own religion in architecture, in painting, in literary academies, in actual life. It was no age of shams, yet a tinge of artifice had become apparent long before it drew to a close. In the latter half of this century, according to M. Rio, letters and the arts had begun to decline and degenerate in Florence, yet there were still some chosen spirits who understood the ideal aspirations of their predecessors and were found worthy to continue the unfinished work of Fra Angelico in the Vatican. With them were associated the leaders of the Umbrian school,—that school, to quote the same orthodox authority, which was imbued with the purest traditions, brought up under the shadow of the sanctuary at Assisi, rich in the frescos of Cimabue

and Giotto, where the painters elevated their genius by the contact of popular piety and monastic fervor. At the head of this band was Sandro Botticelli. Of this master's tendencies, Mr. Pater gives us the following metaphysical summary : "What Dante scorns as alike unworthy of heaven and hell, Botticelli accepts,— that middle world in which men take no side in great conflicts, and decide no great causes, and make no great refusals. . . . The peculiar character of Botticelli is the result of a blending in him of a sympathy for humanity in its uncertain condition, its attractiveness, its investiture at rarer moments in a character of loveliness and energy, with his consciousness of the shadow upon it; of the great things from which it shrinks, and this conveys into his work somewhat more than painting usually attains of the complexion of humanity" (pp. 45, 49, 50). Then follow descriptions of several of his most noted pictures, in which we are told of the "peevish-looking Madonnas," who wish they had been let alone in their humble homes among the gypsy brood who are their true children. It is impossible to argue such a subject by pitting description against description ; but let any one who has seen and studied them recall the circular picture of the Uffizi where the child guides the mother's pen, and that in the Louvre where he lays his little hand against her face with unutterable love and compassion, yet with a natural baby action which every mother knows, and let them decide whether Mr. Pater has not gone very far out of his way to find a meaning for Botticelli's painting which is foreign to it. There is indeed a faltering, a fainting in his Madonnas, as if the burden laid upon them were too heavy to bear, the cup too bitter to drink, but they are sweetness and weakness personified ; not their trouble, but their comfort is the caress of the babe whose tender childish sympathy is blended with the sustaining calm of divine foreknowledge. Botticelli's Madonnas may not be reciting the *Magnificat* or the *Gaude, Maria*, but they are ready to say with drooping head, "Ecce ancilla Domini ; be it unto me according to thy word." He possesses to a singular degree the gift granted to the real masters of that day of making us feel their own personal and peculiar sentiment regarding a subject, however conventional the treatment or crude the ex-

cution, so that it affects us as it affected them. Mr. Pater analyzes it well in speaking of Luca della Robbia: "His work possessed in an extreme degree that peculiar characteristic, the impress of a personal quality, a profound expressiveness, what the French call *intimité*, by which is meant a subtler sense of originality, the seal on a man's work of what is most inward and peculiar in his moods and manner of apprehension; it is what we call expression carried to its highest intensity of degree" (pp. 60, 61).

Before we reach the essay on Michael Angelo's poetry which forms one of Mr. Pater's studies, we have met (p. 57) with the statement that the unfinished condition of many of Michael Angelo's greatest statues was "his way of etherealizing pure form," that "this incompleteness is Michael Angelo's equivalent for color in sculpture." If the author's object be to astonish us by this paradox, we are certainly astonished, but such a mode of producing effect is too much akin to that of a child who hides to jump out and cry "Booh!" After we have once been startled in this way the trick fails, and we laugh or shrug our shoulders. Even those who have never seen the original statues can judge of the value of the interpretation when they learn that the only unfinished portion of the David is a very small bit among the locks of the hair, and in the Dawn, the toes of one foot. Our next surprise is the ascription of "sweetness" to Michael Angelo as an essential element of his ascendancy. Most people would, indeed, be "puzzled" (p. 63) if asked to define wherein that sweetness resides, and equally so to point it out in Victor Hugo, to whom Mr. Pater compares Michael Angelo in this particular; the instance chosen to illustrate it in the former, of the butterfly alighting on the blood-stained barricade being merely a Frenchman's theatrical delight in violent contrasts. Of Michael Angelo's *tenderness*, the deep well whence flows all that softens his severity and makes his tremendous sublimity tolerable to weaker humanity, we hear not a word. Nor of those strange spheres, unvisited by any other mortal, where he dwelt apart among the grand beings whom he has depicted,—that mighty world with its mighty race, Titans, or demi-gods, or stupendous avatars, incorporations of great primordial and moral

forces, standing, reposing, or stalking about in their own immensurate realm.

Mr. Pater closes his chapter on Michael Angelo with a sort of monody on the Medicean chapel, where are the tombs of Lorenzo and Giuliano with their slumberous guardians. "The titles assigned traditionally to the four symbolical figures, 'Night and Day,' 'the Twilight and the Dawn,' are far too definite for them; they come much nearer to the mind and spirit of their author, and are a more direct expression of his thoughts than any merely symbolical conceptions could possibly be. They concentrate and express, less by way of definite conceptions than by the touches, the promptings of a piece of music, all those vague fancies, misgivings, presentiments which shift and mix and define themselves and fade again, whenever the thoughts try to fix themselves with sincerity on the conditions and surroundings of the disembodied spirit. . . . It is a place neither of terrible nor consoling thoughts, but of vague and wistful speculation. Here again Michael Angelo is the disciple not so much of Dante as of the Platonists. . . . And of all that range of sentiment he is the poet, a poet still alive and in possession of our inmost thoughts,—dumb inquiry, the relapse after death into the formlessness which preceded life, change, revolt from that change, then the correcting, hallowing, consoling rush of pity; at last, far off, thin and vague, yet not more vague than the most definite thoughts men have had through three centuries on a matter that has been so near their hearts,—the new body; a passing light, a mere intangible, external effect on those too rigid or too formless faces; a dream that lingers a moment, retreating in the dawn, incomplete, aimless, helpless; a thing with faint hearing, faint memory, faint power of touch; a breath, a flame in the doorway, a feather in the wind." He who can stand in the silent precincts of those awful presences, those solemn genii of the mysterious borderland between Life and Death, the Known and the Unknown, talking of them as if they were airy sylphs or shapeless phantasms, however full of fancy he may be, lacks imagination, enthusiasm, feeling for the power and magnitude of what is real, wholly lacks the capacity to lose himself in the genius even of the greatest.

The essay upon Leonardo da Vinci is far above any which precedes it, because the subject legitimately affords scope for speculation and paradox. The most general and ordinary reading of it must needs abound in guesses and half-expressed meanings, and Mr. Pater's fantastic pen finds here fit material for exquisite elaboration and overlaying with mystical embroidery. If the way to perfection be "through a series of disgusts" (p. 95), one may fancy that at one period of Leonardo's career every picture was a step on the road, such repulsion lurks within the subtle inscrutability of his faces; they may stimulate the curiosity, but while we wonder whether this enigmatical personage, here called St. John the Baptist, there Bacchus, anon the Madonna, again Herodias's daughter, be man or woman, faun or human, angel or demon, we feel that to understand might be to loathe. When Mr. Pater has said that it is "by a certain mystery in his work, and something enigmatical beyond the usual measure of great men, that he fascinates, or perhaps half repels"; that "his type of beauty is so exotic that it fascinates a larger number than it delights, and seems more than that of any other artist to reflect ideas and views and some scheme of the world within"; that by the study of Nature and her occult relations "he learned the art of going deep, of tracking the sources of expression to their subtlest retreats"; and — by way of summing up — "curiosity and the desire of beauty, — these are the two elementary forces in Leonardo's genius"; he has perhaps given us as distinct a conception of Leonardo's genius as words alone can convey. Yet some common-place and common-sense might have been useful in the analysis even of this subject. We should not have had Mr. Pater's eloquent lucubrations about Monna Lisa, for instance; and why does he feel compelled to translate this accepted title and call her Lady Lisa? But neither should we have had such an opinion as he gives of the Last Supper, by which Leonardo is most widely known, — that immortal work of which some common reproduction is the treasure of many a humble home, where the painter's name is a household word with simple souls who never heard of La Gioconda; that work whose power and pathos and living truth have triumphed over anachronisms in treatment, the ravages of accident, the falsi-

fications of restorers, fixing, as our author himself says, the type of Christ for all succeeding generations. "Vasari pretends that the central head was never finished; but finished or unfinished, or owing part of its effect to a mellowing decay, this central head does but consummate the sentiment of the whole company,—ghosts through which you see the wall, faint as the shadows of leaves upon the wall on autumn afternoons, this figure is but the faintest, most spectral of them all. It is the image of what the history it symbolizes has been more and more ever since, paler and paler as it recedes from us. Criticism came with its appeal from mystical unrealities to originals, and restored no life-like reality but these transparent shadows, spirits which have not flesh and bones." This is all that Mr. Pater finds to say of that work which has made real to us Christ in his most human aspect; of that act which still, after nearly two thousand years, whenever it is commemorated has the power to move us to our inmost soul, and draw tears of tenderness from the purest springs of feeling, as for one long lost but ever beloved; the sole act which for all time to come established a bond of earthly fellowship between the Saviour and mankind; which can bring all unborn generations during the brief rite as near their Friend and Master as those who walked with him daily upon earth. In fine, had Mr. Pater been more occupied with his subject than himself, he would have given us, instead of *silhouettes* on cobwebs, a vivid, full-face portrait of Leonardo's personality, about which there is no mystery or secret,—daring rider, graceful dancer, sweet singer, skilful engineer, peerless painter, chemist, caricaturist, mechanician, poet, courtier, handsomest of human beings, the most concrete and consummate illustration of that many-sided and glowing fifteenth century about which Mr. Pater seems bent on weaving veils of mist and moonlight.

The notice of Joachim du Belley is in one way the best chapter in the book, giving the author opportunity for his dainty and delicate fingering, his light strokes of metaphor and suggestion, the short, airy, discursive flights, which he loves, and from which he alights for a moment on cathedral-spires, palace-pinnacles, and tree-tops, on the horizon of his subject, often just at the vanishing-point. But if one wishes for the

gist rather than the pollen-dust of the matter, it is given by Ste. Beuve in the last volume of his *Nouveaux Lundis*.

Of the peculiar metaphysical and ethical views of which Mr. Pater occasionally gives us glimpses, we have yet said nothing. He stands aloof, in an attitude of superfine separateness, whence he critically and dispassionately surveys the world of morals. The most striking instance of this is his way of looking at Winckelman's apostasy, confessedly the result of interested motives ; he considers it the consistent act of a man who is true to the key-note of his nature, who obeys his highest instinct, which, in Winckelman was the artistic. We admit that frequent and careful reading has still left us in doubt as to Mr. Pater's meaning in certain passages, and we shrink from incurring the charge of stupidity, which we ourselves have sometimes sharply brought against critics who cannot discriminate between an author's real opinions and his temporary assumption of the opinions of others. But throughout this last essay, and the conclusion, Mr. Pater lays himself open to the charge of being a heathen, or of trying to be one ; for no Englishman of the present day can become a genuine heathen, any more than he could become a Jew or a Mussulman ; even Mr. Swinburne has only succeeded in being godless. Page 181 he writes as follows : "The temper of the antique world has passed away with that distant age, and we may venture to dwell upon it. . . . Gymnastic originated as part of a religious ritual. The worshipper was to recommend himself to the gods by becoming fleet, and serpentine, and white, and red, like them. The beauty of the palaestra and the beauty of the artist's studio reacted on each other. The youth tried to rival his gods, and his increased beauty passed back into them. *"Ομνυμι πάντας θεοὺς μὴ ἐλέσθαι ἀν την βασελέως αρχὴν ἀντὶ τοῦ καλὸς εἶναι.* That is the form in which one age of the world chose 'the better part,' — a perfect world, if our gods could have seemed forever only fleet and serpentine, and white and red. . . . Let us not say, would that the un perplexed youth of humanity, seeing itself and satisfied, had never passed into a mournful maturity ; for already the deep joy was in store for the spirit of finding the ideal of that youth still red with life in its grave." We can extract no meaning

from all this, except that the only compensation Christianity has given mankind for Greek paganism is in that the resurrection of the body immortalizes materialism. "The form in which one age of the world chose 'the better part,'" — does he really mean that men may choose "the better part" in any form which seems good to themselves? Is there no such thing as calling the worse the better, and that bread which satisfieth not? What became of the uncomely and unlovely ones in such a world as this? Where was the comfort of the feeble and the deformed, — "the disgraced," as the beauty-loving Italians call them still, — of the unsuccessful, the unhappy? They were not pointed to one whose visage was so marred more than any man; *that* earth was an earth for the beautiful and the beloved, but not for others, and there was no different heaven for them to raise their eyes to. He says that "the mystical art of the Christian middle age is always struggling to express thoughts beyond itself"; and in this respect compares Fra Angelico's Coronation of the Virgin with "the many-headed gods of the East, the orientalized Ephesian Diana with its numerous breasts, . . . overcharged symbols, a means of hinting at an idea which art cannot adequately express, which still remains in the world of shadows." So the best that mediæval genius and piety have produced is to be likened to the monstrous idols of barbarous nations! "Such forms of art are inadequate to the matter they clothe; they remain ever below its level." Ay, but how do they lift the soul and intellect to regions which cannot be expressed? *there* is the key to the language which cannot be translated into common speech; *there* dwell the truths which can only be shown in types, — but that language is not a whisper, those truths are not shadows. "The broad characteristic of all religions, as they exist for the greatest number, is a universal pagan sentiment, a paganism . . . which has lingered far onward into the Christian world, ineradicable, because its seed is an element of the very soil out of which it springs. This pagan sentiment measures the sadness with which the human mind is filled whenever its thoughts wander far from what is here and now. . . . It is with a rush of homesickness that the thought of death presents itself. He would remain at home forever on earth if he could.

. . . Such sentiment is the eternal stock of all religions modified, indeed, by changes of time and place, but indestructible, because its root is so deep in the earth of man's nature. The breath of religious initiators passes over them; a few 'rise up with wings, as eagles,' but the broad level of religious life is not permanently changed. Religious progress, like all purely spiritual progress, is confined to a few." Could this assertion be proclaimed to the world in intelligible terms, hundreds of thousands of fervent voices would deny it from the profoundest recesses of their soul. It is not the prescience of homesickness for this groaning earth, this travailing creation, which makes life sombre and sad; it is the sense of exile, the intimations of a former and a future state to which we truly belong; the dim consciousness of a task to be done, a race to be run, a fight to be fought, a term to be fulfilled, a probation to be endured, which is at once the bane and the balm of mortal existence. It is towards this better country that all Christendom is yearning, is tending; it is the voice of this yearning which finds utterance in such hymns as, "Jerusalem the golden," and "I would not live alway," for multitudes who cannot clothe their aspirations in words of their own. And all this is so old,—so old,—that it seems strange there should be need to say it again; but old as it is, it is not worn out, for it is true. Mr. Pater goes on elaborating rather than expanding his idea, talking about the "pagan sentiment," and the "pagan sadness," and the forms they have taken in various European countries, ignoring the trite fact that just where religion has retained most of the old heathen element in creed and ceremonial, is where the material, the finite prevails, and where men are most gay and childlike; while it is where the level of religious life *has* been changed and raised, that the seriousness, the sadness, if he will, is to be found, because the sense of banishment, the longing for the real home is deeper; but there, too, is the serener and the loftier cheer. When he styles the Roman Catholic ritual a "'sad mechanic exercise,'" one is almost irritated by his perversity and love of paradox. Yet, notwithstanding the evident contradiction, he will have it that whatever of calm or joyousness was left in the religious life of Christendom was a remnant of paganism or a revival of art.

"Even in the worship of sorrow the native blitheness of art asserted itself" (p. 199). Why not acknowledge that, to the exalted religious perception, the eternal sun becomes visible behind the clouds, that the clear shining of the perfect day transfuses the mists of earth? He insists on the "*grayness* of the ideal or spiritual world," as compared with the rich colors of the sensuous; he has never lifted his eyes to the sun-illumined blue of the purest ideal, the highest spiritual life, nor beheld the snowy ranges of sublimest abstract thought and principle flushed with the warm feelings of humanity and benevolence, fiery with patriotism, with the martyr-spirit, with all intense enthusiasms; he has not rejoiced in the rainbow tints of hope, the glow of faith, the deep-hued ardor of adoration.

Once more let him speak for himself (p. 210): "The service of philosophy, and of religion and culture as well, to the human spirit, is to startle it into a sharp and eager observation. Every moment some form grows perfect in hand and face; some tone on the hills or sea is choicer than the rest; some mood of passion or insight or intellectual excitement is irresistibly real and attractive for us,—for that moment only. Not the fruit of experience, but experience itself, is the end. A counted number of pulses only is given to us of a variegated, dramatic life. How may we see in them all that is to be seen in them by the finest senses? How can we pass most swiftly from point to point, and be present always at the focus where the greatest number of vital forces unite in their purest energy?

"To burn always with this hard, gem-like flame, to maintain this ecstasy, is success in life. Failure is to form habits; for habit is relative to a stereotyped world; meantime it is only the roughness of the eye that makes any two persons, things, situations, seem alike. While all melts under our feet, we may well catch at any exquisite passion or any contribution to knowledge that seems by a lifted horizon to set the spirit free for a moment, or any stirring of the senses, strange dyes, strange flowers, and curious odors, or work of the artist's hands, or the face of one's friend. Not to discriminate every moment some passionate attitude in those about us, and in the

brilliance of their gifts some tragic dividing of forces on their ways, is, on this short day of frost and sun, to sleep before evening. With this sense of the splendor of our experience and of its awful brevity, gathering all we are into one desperate effort to see and touch, we shall hardly have time to make theories about the things we see and touch. . . . We are all *condamnés*, as Victor Hugo says" (Victor Hugo again!) : "*les hommes sont tous condamnés à mort avec des sursis indéfinis*: we have an interval, and then our place knows us no more. Some spend this interval in listlessness, some in high passions, the wisest in art and song. For our one chance is in expanding that interval, in getting as many pulsations as possible into the given time. High passions give one this quickened sense of life, ecstasy and sorrow of love, political or religious enthusiasm, or the 'enthusiasm of humanity.' Only be sure it is passion, that it does yield you this fruit of a quickened, multiplied consciousness. Of this wisdom the poetic passion, the desire of beauty, the love of art for art's sake, has most; for art comes to you professing frankly to give nothing but the highest quality to your moments as they pass, and simply for those moments' sake."

So ends the book. The last two chapters have little in common with the rest, beyond that of being within the same covers. The preceding essays form a separate part, of which the result is inconclusive and insubstantial; the theories of art are Winckelman's, the theories of life are Goethe's; but Mr. Pater has passed them through his own peculiar medium, and we are left with only the fine-spun sieve and a residuum of filmy impressions. Compared with the latter portion of the book, Mr. Ruskin's most incoherent utterances are worthy of respect, for he at least is always in earnest, and never talks of art with its high aspirations and profound convictions as a pastime, or of life with its solemn issues, its rapture and its anguish, as a play or a picture-gallery where the wise man lounges in cold-blooded dilettanteism, reckoning his emotions by clock and thermometer. These concluding chapters have at least this merit: they are definite and tangible as to what they attempt to express; it is for the reader to judge whether that be true, wholesome, even sensible, or false, foolish, and pernicious.

It is a relief to turn from threading this maze to follow M. Rio, who, although he sometimes chooses devious ways, always shows you whither he is tending. M. Rio may be called, by way of classification, the ultramontane critic. He is, in a certain sense, a man of one idea; the exaltation of the Roman Catholic Church is the one object of which he never loses sight; all others must be subordinated so as not to shut it out, all paths must be straightened or twisted to lead to it. His style is admirably suited for a serious undertaking: clear, simple, temperate, dignified, not without energy on occasion, and sometimes swelling into a solemn pomp of words. He is too deeply penetrated with the dignity of his subject ever to be amusing; he eschews gossip in a way which is tantalizing to a lighter-minded reader. On the other hand, he can, when he sees fit, tell an anecdote in a very touching and impressive manner, and has a remarkable gift of seizing upon striking, original figures, or crises, grouping about them subordinate personages and incidents in a way to produce a picturesque and dramatic effect; of gathering together the events of a period and so arranging them as to give relief and apparent predominance to one idea. In what a dignified and impressive attitude he shows us the Church through all her vicissitudes during those eventful centuries which witnessed the revival of classic letters; how she rises to the height of every situation, and towers above them all; how she meets her enemies even upon their own ground of profane knowledge, and annihilates them! The art which M. Rio displays in this mode of producing effects leads one to wonder whether a deep tinge of mediævalism which pervades his work be a quality of his mind or a requisite of his part. The chief cause for doubt is that in questions of taste and artistic opinion he proves himself to be so just, discriminating, and advanced, that one is fain to ask whether his judgment in other matters can really halt so far behind it in these, for his criticisms are not merely perceptive, the result of organization, but imply reflection, moderation, balance, and good sense. It may be that he uses this semblance of mediævalism, which is not in itself repulsive, to cloak other less amiable defects; he has no sympathy with liberty in any shape; none for progress; none even for human greatness

or suffering when not met in orthodox walks. The history of Siena, during the latter half of the fourteenth century, is a series of the most spirited and dauntless struggles on the part of her citizens to throw off the tyrannous rule of the nobility ; neither defeat nor the utmost devilishness of punishment could drive them to despair ; yet M. Rio ranges himself on the side of authority, save when authority itself rose against spiritual oppression ; even the Siennese artists of their brief republican days could not be good painters because they were patriots ; he speaks of them with reprobation and contempt because they painted civic and military standards, instead of banners for religious processions. He sneers at the martyr Huss as an illiterate fanatic who destroyed statues in his barbarous fury against image worship, although referring respectfully to Nicholas V.'s discouragement of both contemporary sculpture and the search for the antique, because to his Holiness they had a taint of idolatry. His tone is almost inquisitorial when telling the story of the classical academy which was persecuted with outrageous severity by Paul II. on charges of conspiracy and heresy, "being only cleared of the former," adds M. Rio, grimly. All this is evidently genuine, yet we cannot but doubt the sincerity of his lamentations over the destruction of the earnestly meant scrawls of early days to make way for the consummate productions of the sixteenth century, or that he really believes that the decadence of art began in spirit long previous to its culmination in point of fact. Indeed, sincerity is a quality of which the want is sadly felt throughout, sincerity and singleness of purpose ; for although he has evidently taken as his thesis the dependence of art upon religion, and developed it upon the assumption that there is no religion except that of papal dogma, art is his ostensible topic. This convergence of all his theories and views, this determination to bend or warp everything to one direction, forbids scope or variety in his mode of treating art or history ; it interferes with his fairness to individuals, his honesty about facts, and his candor as to works of art, to a degree which impairs the value of his opinions. There is, withal, such an expenditure of casuistry and sophistry by way of argument, such a turn for exegesis, such a magisterial and authoritative accent, such a

professional habit of improving the occasion, that, although we know M. Rio to be a layman, the husband of an English wife, and father of a family, the impression abides that our author wears a cassock and addresses us from the chair of theology in a Jesuit college. This is not the way to treat of art, albeit Christian art; and whatever the subject may gain by his *ex cathedra* manner, it loses by his lack of candor, and by his excursions into secular regions against the enemies of his church.

To his mediævalism, real or assumed, belongs the reverence with which M. Rio touches everything traditional; he alludes to the pictures of the Madonna ascribed to St. Luke, to the discovery of relics,—the inscription over the cross, the lance which pierced Christ's side, the Virgin's wedding-ring, and many more,—with imperturbable gravity. Perhaps an absence of humor may be part of the same temper of mind; not, as we have already said, that he would permit himself to be amusing, but we think he must be unconscious of the absurd side of some of his stories, or he would not tell them. His morals are mediæval too concerning pious frauds, and thefts proceeding from a devout desire to secure some sacred prize.

Having prepared our readers for M. Rio's peculiarities, we will try to do justice to his performance. He begins his long introduction by stating that in the respective religious systems of various nations there is one point which dominates all others and indicates the special vocation of each which has determined the direction of its moral and intellectual development, which was its heritage from the wreck of the primitive creed. The progress of each keeps pace with its fidelity to this central idea. With the Greeks it was that of man's double degradation, physical and moral; and it would seem as though this privileged race had chosen as its mission the rehabilitation of man spiritually and corporeally, and thus had given the world the notion of the ideal. M. Rio takes a rapid review of Grecian art for the sake of the parallels which he finds in it; where he cannot actually trace the original line, his faculty of taking for granted stands him in very good stead. He sees a mysterious coincidence between the miraculously begotten Minerva and the immaculately conceived Mary; be-

tween Apollo the Python-slayer and St. Michael with the dragon ; between the story of Orpheus and the history of our Saviour ; he even suggests very gently an occult relation between the fable of Hercules and the life of Christ. From Greece he passes to Rome, where there are more prototypes and parallels ; a prevision of the rule of the Benedictine order is found in the *Æneid*. M. Rio expatiates with pride and pleasure on the glory of ancient Rome, for to him she is but the antetype of the Rome of the papacy ; all roads lead thither ; she is the pivot of the earth, the centre and starting-point of Christendom, as the famous milestone in the forum was of the ancient world. In the days of Adrian, when the worship of the Roman people had died out, the true Roman people was to be found worshipping secretly in the catacombs. Here Christian art commences. Its beginnings are to be traced in the simple outlines of the crown, the cross, the palm-branch, the dove with the olive-leaf, the lamb, the good shepherd, of which we have heard until our enthusiasm has been overtaxed ; but the actual sight of one of those rude designs thrills us with a new emotion and we pore over them even on the walls of the Lateran Museum where hundreds have been collected, with the most intense interest, and grudge to pass over a single record of those unknown lives and deaths which seem all the higher and holier from their obscurity. M. Rio sees decadence in the very first step which Christian art made in coming above ground ; it loses its simplicity and renounces much of its symbolism. The subjects of the earliest paintings after Christianity found protectors instead of persecutors in the emperors, were chiefly drawn from the Apocalypse and typified the sufferings and rewards of believers. Mosaics followed ; in speaking of them he says, as he does elsewhere in other words of all early and perfectly earnest art, that they have a dignity and a depth of expression which neither correctness of form nor charm of color can supply, and which raise them above the domain of criticism.

M. Rio gives a succinct account of the successive steps of the Middle Ages, touching upon every salient point capable of a Romanistic interpretation. The separation of the Eastern and Western empires under Leo the Isaurian he represents as a

purely religious movement, the resistance of orthodox subjects to iconoclastic despotism; then came the universal dread of the end of the world at the approach of the year 1000; the institution of chivalry; the creation of the monastic orders; the crusades; the gradual formation of the legend (whose remarkable propensity to *grow*, M. Rio, with a gravity comical to uncatholic ears, compares to the mysterious development of the vegetable world or that of speech); the romances of the Round Table, with the story of the Saint Grail which marks the appearance of mysticism in mediæval literature; the foundation of the military orders; and thus we reach the year 1300 and its famous jubilee, with which the Middle Ages close. With them the introduction closes and the history begins.

M. Rio ascribes the reawakening of art to the great spiritual stirring of the thirteenth century, and therefore considers it independent of the influence of antiquity; he asserts that the first essays in a new style of architecture, with their magnificent and solemn results, were the birth of a fresh inspiration unconnected with any ancient origin. That this may be true of architecture we can believe, as it was far in advance of painting and sculpture; but before the other arts had half roused themselves from the torpor of a thousand years, the study of classic literature had absorbed the attention of the literary world, in fact had first created a literary world. M. Rio himself well marks the difference in the spirit of the two periods by the difference in the internal decoration of their churches; in the earlier ones the painters were so unconscious of themselves and preoccupied with their pious subjects that they did not waste a corner in the sanctuary on mere ornament; all the room was needed for the *dramatis personæ* of the sacred events or miraculous episodes they were depicting; not an inch was to be spared to accessories; what a contrast to the schools which came by and by to scrape off all this devout company and cover the space with the graceful and wanton luxuriance of their fancy in arabesques and chaplets, fabulous flowers and fictitious monsters! But with regard to his favorite theories we ought to let him speak without contradicting him at every word. "We must not forget the fortunate, but in no wise fortuitous, coincidence by which art revived in the

same century in which great saints and great poets were so deeply taken up each in their own way by the pursuit of the ideal. The character of its artistic productions was thus decided beforehand, not by conventional conformity, but because of the mysterious relation which has always existed between the art of a century and its predominating tendencies, whatever they may be." "In studying the history of art it is important to give full weight to its natural affinities with sanctity, heroism, and genius, that is to say, with the three sorts of greatness which rise above all others in the eyes of nations as in the eyes of wise men."

The jubilee of the year 1300 was certainly the inauguration of a new era, and M. Rio finds it a convenient point of departure for his most detailed and careful study of the Italian schools of art. He gives the priority to Siena, although it is commonly claimed for Florence; Giotto he calls the founder of the latter school, considering Cimabue as Byzantine. He places the Renaissance at the opening of the fifteenth century, and the word for him is the knell of Christian art; yet how slow its dissolution must have been is attested by the numerous volumes through which M. Rio is forced to follow it to the tomb. He discriminates, however, between the classic and pagan enthusiasm which form two distinct phases of the movement, a difference on which he insists from motives which afterwards appear. The chapters on the Siennese and Florentine schools are followed by two on the Renaissance and the Medicis, and two more on the Renaissance and the Papacy. The first make mention of all the artists, native or foreign, who worked in Florence during the fifteenth and sixteenth centuries, and one of the most charming passages in the entire work is the account of Luca della Robbia and his successors; but the real object of the four is to show that the Medici were not patrons of art or letters; that the Popes were the true Mecænases of the time. Naturally no good Catholic can look with a friendly eye on the family which gave Leo X. and Clement VII. to the chair of St. Peter, and M. Rio knows when to sacrifice a pope for the good of the Church. The chapters on Savonarola and his disciples, although they do not follow in immediate order, complete this series. Savonarola

may be reckoned as an influence on the art of the fifteenth and sixteenth centuries for the sake of the many distinguished painters who were among his followers, although personally he was a far worse foe to painting and sculpture than poor Huss. M. Rio's account of him is the finest thing in the book ; our author is fully, nay unusually, capable of noble enthusiasm, and he is fervent in his admiration of this lofty, ardent spirit. Yet the drift of it all is to prove that the denunciations of the reformer were against the evil manners of his time alone, against the gross paganism into which the Renaissance had plunged, but by no means against the abuses of the hierarchy. M. Rio is aware that Savonarola does more credit to the Church than Alexander VI., and is willing to consider the former as a prophet and the latter as a castaway, but for that very reason the prophet must be held a zealous Catholic. And withal Alexander is exonerated from the odium of Savonarola's death, which is set down entirely to the hostility of Florentine money-changers and money-makers, who found that his preachings interfered with their profits. He fell victim to the enmity of the greedy Medici. However just the opprobrium with which M. Rio stigmatizes that family may be, he is not judicious in trying to deprive them of their reputation as munificent patrons of arts and letters. Their title cannot depend upon Vasari's inaccuracies alone, — negative proof at best ; if there were no other contemporary testimony in their favor, it would be puerile to deny their claims with the very stones of Florence telling their praises to this day. He makes a similar attempt with regard to the Estes of Ferrara, devoting two chapters to the task of proving that there was never any school of art, never any love of letters, nor learning, nor culture at their capital. He overreaches himself, for the answer is obvious ; why give two chapters to a place which produced nothing ? He gives a chronological table of the dynasty from the thirteenth century to the sixteenth, inclusive, followed by a catalogue of their crimes, and asks us whether such monsters could encourage anything good or beautiful. They were horrid wretches certainly, but unfortunately no worse than their neighbors, and the facts are all against him. No city of the same size is so stately with palaces and villas, all built by the

Este princes, as that now silent and grass-grown Ferrara. No capital was so much sought by great men, produced so many distinguished women,—it is enough to name Olimpia Morata and St. Catherine Vigri; Tasso's tragic story is no proof that genius was not honored at that court whose splendid patronage was made illustrious by so many great clients, Ariosto, Boiardo, Guarini, and a host more; the university ranked with any in Italy; a writer often quoted by M. Rio (Zanetti) places the painters of Ferrara at the head of the minor schools; the dukes caused the ancient Greek and Latin drama to be represented at their theatre at an immense cost; in times of scarcity they imported breadstuffs, which they distributed gratis to the people. By M. Rio's own showing, Ferrarese distinguished in every branch of art were scattered all over Italy during the fifteenth and sixteenth centuries; he calls them exiles, and says they were driven from home by want of encouragement, yet Ferrara still abounds in their works; and although he asserts that the artists of other states, beginning with Giotto, were called to the surrounding courts, but none was ever bidden to Ferrara, *every famous painter from Giotto to Titian*, inclusive, was entertained and employed there. We are lost in amazement at these falsifications, until their motive breaks upon us. From the earliest times down Ferrara was noted for her liberality in religious matters; in the thirteenth century the heresy of Armanno Pungilupo was tolerated by the reigning family and favored by the people until crushed by papal intervention; in the sixteenth, Clement Marot and Calvin found refuge and sympathy at the court. This explains everything.

The schools of Umbria,—to which M. Rio assigns the crown and palm of Italian art,—of Lombardy, Milan, Bergamo, Lodi, Cremona (these three not without a word of apology for giving them separate chapters), Venice, and Rome are examined in turn. There are special analyses of the genius and influence of Gian Bellini, Michael Angelo, Raphael, and even Leonardo da Vinci; the historian of Christian art cannot restrain his admiration for that supreme incarnation of the Renaissance. There is also a special notice of the Mystic school, at whose head stands the sweet and saintly

figure of Fra Angelico. M. Rio's way of looking at this phase of art contrasts curiously with Mr. Pater's; to be able to define the limits of such a subject one must be a thorough *connoisseur*, and something else besides; he disposes of adverse criticism in a single sentence which covers the whole question: "Religious painting, calling to its aid certain resources and tending towards a certain goal, becomes mystic painting, which implies *objectively* the highest form of the ideal, *subjectively* the sublimest flights of which the soul's faculties are capable. Once launched on this perilous path, the intuitions of the artist have something analogous to what is called, in the language of the saints, *the beatific vision*, and mere mechanical execution is nothing more to the art than the outer envelope to the blossom." In these various connections M. Rio shows great skill and plausibility in endeavoring to maintain his position that the Papacy has always been the friend of true enlightenment and culture, and for this it is that he lays so much stress on his distinction between classic and pagan antiquity. Nevertheless, we do not find this line respected for a moment by his two paragons, the eager and erudite Nicholas V. or the elegant and versatile scholar, Pius II., both of them men as eminent and attractive by their virtues as by their attainments, but who asked no questions for conscience' sake when following their favorite pursuits. Yet he marks the pontificate of Innocent VIII. (1484 to 1492), with the increasing ascendancy of the Medici in the college of cardinals, as the point when "the Renaissance entered upon its second phase, that is, from being servant it aspired to become mistress." And mistress it was in the sixteenth century when it attained its height, a dazzling and dizzy height, whence it fell and expired before the hundred years were fully sped.

The result of this survey, at once minute and comprehensive, is given in four stout octavo volumes, with two additional ones of Epilogue, which it is well that art students should know have nothing to do with the subject proper, being M. Rio's autobiography and his reminiscences of the La Ferronays family. We have not forgotten how frequently the old painters introduced their noble patrons prominently into their sacred pictures and put themselves humbly kneeling in a corner; but

even with this analogy in mind, there is an unpleasant flavor of funkeyism in these supplementary volumes. M. Rio has taken as his epigraph the well-worn "Ars longa vita brevis est"; in treating his subject on such a scale, he apparently remembers only the first clause; still it is not easy to see how he could have abridged it consistently with his own plan. The constant recurrence of the same names and dates produces an occasional weariness; we feel as if we were moving to and fro in parallel lines without advancing; but this is due to the division into schools instead of periods; many of them overlap as to time, and we meet the same disciple laboring in divers vineyards; we seem to be treading the same ground when we are only following the same footsteps in pastures new. It is difficult, too, with a desire not to pass over a single name, to avoid falling into a mere enumeration of names now and then; there is great skill shown in escaping this, and contriving to connect some point of interest, some ray of individuality, with the most obscure. But M. Rio, being as we have said a man of one idea, produces a monotony in his views and sentiments which in the end cannot fail to be wearisome. Moreover, in taking for the subject of his book "Christian Art," he should have confined himself to the strict limits of his subject and have ended with the date which he fixes for the decline of art, the moment when the spirit of the Renaissance got the upper hand of religious sentiment; having departed from this, he is forced into drawing distinctions between the moral and æsthetic value of various productions in a way calculated to mislead the general reader as to their absolute merit. We feel at last that we are hearing but one side, and close the book in a dissatisfied frame of mind.

M. Burckhardt surveys the great pageant of the fifteenth and sixteenth centuries, not in its artistic, but in its historic, social, moral, and intellectual aspects. Some familiarity with these is necessary to make the art of the period intelligible, and in his pages we learn to understand the manifold influences which wrought upon the genius of the time, the patronage, the hostility, the stimulus, the drawbacks, the inspiration, the humors, the aims, which controlled its career. We learn to know the men and women who look out at us from the can-

vases, who rest beneath the sculptured tombs, whose piety or whose pride raised the churches, whose love of learning gathered the libraries, whose love of art formed the galleries and museums, for whose delight the palaces and villas and gardens saw the day. We watch the growth of the Renaissance ; we see the hands that built it, the extraordinary variety of material which went to form the wondrous edifice, the noble, lavish, splendid life that was lived within it, the blood and pollution and ruin into which it fell. It is presented to us first from a political point of view, the state as a work of art. The close of the long conflict between the Papacy and the Hohenstaufens left Italy shattered to pieces ; her unity as a country was gone ; with the supremacy of the emperor she lost her head, her suzerain, and every king, duke, marquis, count, and little feudal lord asserted his own independence by violence, treachery, and cruelty ; famous free-lances snatched sovereignties and founded families for themselves ; in the barbarous immorality of the times illegitimacy was no bar to the succession ; petty principalities were swallowed up by more powerful ones ; dynasties expired through internecine hate ; republics, too, arose no less tyrannous and perfidious in their sway. Yet out of this chaos there gradually struggled, feeble and formless at first, but gathering shape and strength with its growth, the notion of modern statesmanship. By degrees, alike in despotisms and republics, the thought became definite that there were better and safer terms of existence than perpetual warfare with one's neighbors or fellow-citizens. Despotism continued to be the common form of government, becoming in the hands of some of the small autocrats almost patriarchal, while others seem to have overstepped the boundary between madmen and monsters. But as time goes on the madmen and monsters become fewer and give place to men sometimes not less wicked but more civilized in their crime, sometimes to such chivalrous and princely figures as Federigo di Montefeltro and Francesco Sforza. Notions of political economy, finance, foreign relations, of national dignity and aggrandizement, were gradually developed ; even war was studied as an art in the interest of humanity ; the atrocities which marked Italian warfare in the sixteenth century were introduced by foreign mercenaries

or invading armies, chiefly by the Spaniards. The thought of Italian unity, or a federation of the Italian powers, perpetually recurs in one form or another ; Dante, Petrarch, Savonarola, Machiavelli, — who elaborated the theory of the state to a masterpiece, — each contemplated it from his own plane ; it assumed an alarming form in the projects of the Medici, with Leo X. for Pope, to make Giuliano king of Southern and Lorenzo of Central and Upper Italy. The Papacy as a government was behind the other states in these ideas, and backward in all improvements ; after the severe lessons of the Avignonese exile and the great schism of the Church, which should have been so salutary, nepotism, simony, the sale of indulgences, and all the abuses which led to the Reformation, were gaining ground again, and these were vices of administration as much as moral iniquities. So oppressively was the Church as a body politic felt to be a bar to progress, that the suggestion of the secularization of her states was familiar to the fifteenth century ; it was so general that Cæsar Borgia thought of turning it to his own account by seizing on the temporal power on the death of his father, Alexander VI. In the opinion of Burckhardt, as of many living Italian statesmen, the Reformation alone prevented the fall of the temporal power three hundred years ago. In the latter half of the sixteenth century the leading churchmen saw the vital necessity of a vigorous effort ; a counter-reformation was started with a stern reform in the morals of the priesthood, especially in high places ; new monastic orders were instituted ; nepotism was tolerated only as a means of placing in positions of secular influence those who could be reckoned upon to support the Papacy ; a close alliance was contracted with the Catholic powers whose piety received an impulse from the dangers which assailed the Holy See ; and a number of energetic and single-minded popes, like the fanatical Caraffa, Paul IV., and the resolute and able Sixtus V., aided by circumstances, succeeded in arresting their portion of the world on its onward way. Successive inundations of invasion checked the growth of national sentiment and development in the rest of Italy, so that the art of statecraft shared the fate of letters and the fine arts.

The existence of these numerous states, republics or despots-

isms, gave opportunities for individual development such as no modern government affords. Whether a Visconti was training his dogs to devour his subjects, or an Este was regulating the taxes, or a Montefeltro was keeping open table at which he and his guests were entertained by the reading of some devout book or heroic poem, each was exercising unchecked his natural propensities, while his court offered a field for private distinction of every sort. Isolated and sharply defined individualities appear early in Italian history ; the times of Barbarossa and Gregory VII. called them forth, as eventful epochs seldom fail to do, but chiefly in conspicuous positions. Later on, the growing importance of various courts and the general diffusion of culture produced in private life men and women of the most marked originality, who turned their five talents to ten, or their ten to a thousand, with no motive beyond that of perfecting their own personality. Even the evils of the time taught people to rely upon their own resources, and kept their faculties, like their weapons, always sharp and ready for use. As new tastes, new interests, new industries were introduced, the intellectual and æsthetic development of many became almost prodigious ; their culture was not many-sided, but orb-like, universal, embracing acquirements which might be deemed incompatible from their nature and impossible from their number. The chapter which Burckhardt devotes to the phenomena of this sudden expansion is of the liveliest interest ; all the tendencies and influences which produced the composite and cosmopolite character in which it reached its acme are examined ; love of fame,— of what is termed immortality,— which begot the desire for splendid sepulchres ; aristocratic proclivities ; luxury ; love of art ; the strange combination of enthusiasm and mockery in the spirit of the age ; enjoyment of wit, satire, even buffoonery ; a sense of heroism and dignity ; keen curiosity. Men cultivated universality as a single form of genius is cultivated now, and we can still see the traces of the fine finish they sought to put upon life and themselves. Our author thinks that under so many stimulating and favorable conditions Italy would have bloomed and ripened abundantly without the impulse given by the rediscovery of antiquity ; that by so many new avenues the human intellect must have

reached some memorable height in its course. M. Rio, as we have seen, is convinced of this; what paramount thought would have given the stamp to the ardent and opulent genius of the fifteenth and sixteenth centuries, had the Renaissance never been, is an alluring sphere for speculation, but one with which we have nothing to do. Isolated and infrequent students of classic learning are to be found in the twelfth and thirteenth centuries, but it was not until the fourteenth that the growing thirst for knowledge turned towards long-deserted fountains, nor until the fifteenth that the whole mind of Italy was saturated in them. Human intelligence, newly awakened, emerging from the fogs of the Middle Ages, found classic antiquity waiting like a guide, and followed her chart with its precise and positive indications. Towards the close of the fourteenth century Fazio degli Uberti wrote his *Dittamondo*, an account of an imaginary journey to real places; he visits one town in honor of its patron saint, another for the sake of some local legend of the Madonna; he reaches the Eternal City, and hallowed memories throng around him from every quarter, but from their midst advances a majestic beldame in queenly tatters, tells him the glorious story of her youth, leads him to a spot whence he can command the seven hills and their world of ruins, and says, "I am Rome; know by these how beautiful I was!"

The wholesale destruction of classic monuments by using ancient buildings as stone quarries, and, what was far worse, burning sculptured marble to procure lime, was in full force as late as the middle of the fifteenth century, when the increasing sense of the beautiful and reverence for antiquity put a stop to it. The ruins were made a subject of study, not for their architectural merit alone, but for any scrap of inscription they might reveal; archaeology made its appearance, excavations were begun with the fond hope that men would find their long-buried love, not dead, but sleeping, beneath the fragments of a thousand years. The palimpsest MSS. of monkish authors were searchingly interrogated for the classic secrets they concealed. Oratory, especially funeral discourses, came into fashion again; and in literature the epigram, so well adapted to the concise and caustic Italian wits. The taste for Grecian

letters had been revived by Manuel Chrysoloras, a Greek political emissary to Florence, whose specialty had the rare good fortune to chime with the humor of the hour. He lectured in Florence for several years on the language and literature of his native country, and excited almost a fanaticism for the study of Greek ; he was succeeded by many lettered refugees, who commanded position and emolument as commentators and transcribers. The ambition of every man of education was to possess copies of the ancient authors, and a host of copyists were soon at work ; calligraphy was at its highest premium ; the exquisite illumination of missals gave way entirely to the art of engrossing fair Greek and Roman characters. Printing suddenly appeared in answer to the urgent demand, despised at first by bibliophiles ; but prejudice soon gave way before the practical advantages of the invention. Although utility triumphed in this particular, the worship of beauty had got possession of men's souls through the wide-spread study of the antique. The literary academies which sprang up on every side for the cultivation of classic lore held their meetings in dark green gardens, where, through the shadows of cypress and myrtle, gleamed the white forms of ancient statues and the elegant outline of the *loggia*, erected in memory of the porch of the philosophic schools. Victors were complimented by triumphal processions ; poets were solemnly crowned with laurel ; children were called by classic names, and men took a Latin or Atticized form of their own, or even changed it altogether. There was incessant emulation among the rich and noble to prove themselves the most accomplished scholars, the most munificent patrons ; indeed, in public men it became essential to their popularity ; sovereign princes everywhere set the example ; the two Popes of the fifteenth century who were best as men were foremost among the humanists ; Martin V., the humble and enthusiastic student, when near his end, thanked God for having given him the love of letters ; Pius II. pointed with pride to his name, Æneas Sylvius, as proof of his classic lineage ; even Paul II., the Venetian Barbaro, the persecutor of the Platonists, claimed descent from Ænobarbus.

The love of travel, of distant journeys and voyages of dis-

covery, was kindled by acquaintance with those wonderful ancients who had been explorers too. This struck the spark in the breasts of men whose creative energies could not expend themselves in fashioning a calm and contemplative existence after the classic ideals, and drove them abroad into the outer world. Columbus and Vespucci sailed forth to seek another hemisphere. The terrestrial universe became an object of intense curiosity, which kept pace, perhaps, with an increasing earthiness, a mundane and finite way of looking at things. Geography, astronomy, botany, natural history, and kindred sciences were caught up in this omnivorous greed of hungerers and thirsters for knowledge. Philology was the corollary of Greek, Latin, and Arabic studies ; ethnology followed in sure sequence. But the subjective side of life had been revealed to the minds of men, and besides the investigation of the earth's surface and properties, her varied aspects began to make their impression. Pius II., the most amiable and sympathetic physiognomy that looks forth from the dazzle of that day, loved Nature as we love her now, and described her as those do who love ; he saw the flower of the flax, the shadow of the rock, the undulation of the grain-fields, and heard the ripple of the wave and the song of the thrush. Leon Battista Alberti's eyes and ears had been opened by the magic touch which does not illuminate all alike. Smiling or frowning backgrounds of natural scenery, rejoicing or mysterious, appear in the pictures of the great masters. And this new attention to Nature was but the next step to a deeper insight into humanity ; biographies, autobiographies, and memoirs were written, attesting the interest with which men were considering themselves and others as conscious, sentient beings ; analysis and introspection had begun.

The foregoing summary of the complex creative and motive forces of the era, and the innumerable forms of intellectual activity which they brought forth, is a faint repetition of an often-told tale. But with M. Burckhardt we seem to stand on a lofty tower of past days, and our glance ranges round a magnificent horizon ; countless new points of interest and importance become visible ; we see the natural juxtaposition and proportion of things which have hitherto been magnified,

dwarfed, distorted, or altogether overlooked ; we discern the heights where the beacons were kindled ; we behold the panorama of the Renaissance with our eyes of the present, but, in its native colors, in the light of its own day and the atmosphere of its age. Then he unroofs for us the life of the times, and shows us the guests crowned with roses reclining at the symposium ; conspirators whetting their daggers and firing their souls by the example of Aristogiton and Brutus ; academicians raising altars to Romulus ; humanists in their libraries, with lamp alight before the bust of Plato, poring over ancient treatises of philosophy ; poisoners mixing their drugs ; young daughters of noble houses studying side by side with their brothers all that learning incarnate could impart ; alchemists, half credulous, half impostors, with crucibles and horoscopes and magic mirrors, dabbling in occult sciences ; ladies tinting their hair golden and painting their cheeks and eyelids ; beautiful and erudite princesses holding an easy state amid a throng of poets, painters, and scholars ; Aspasia no less beautiful and accomplished surrounded by a court of princes and prelates. We see Astorso Baglione in glittering armor swoop down single-handed on a crowd of insurgents before the cathedral of Perugia, leaving perhaps an indelible vision on the memory of the child Raphael to be transmitted to latest posterity as St. Michael driving forth Heliodorus ; we see the heroic Catherine Sforza defying Cæsar Borgia and his troops from the battlements of her little capital of Forli ; the gentle Pius II. holding audience of a summer's day under the chestnuts and ilexes of Monte Anciota ; the adventurous Benvenuto Cellini at his nocturnal incantation in the ruins of the Coliseum. We see how a pursuit became a passion, the passion a mania, the mania a folly, an affectation, and a crime. How the life moulded to a conscious imitation of a classic ideal fell from platonism to epicureanism and at last to mere wallowing.

M. Burckhardt thinks that the great service of the Renaissance was its opening a vast arena outside of the Church for independent thought and individual development. He finds an obvious cause of deterioration in the undiscriminating enthusiasm for antiquity which drew no distinction between the

virtues and foibles or vices of its heroes. He makes imagination responsible for a great share in the characteristics of the Italians both good and bad, and this is a new view of them, as their sensuousness and its worst results, their materialism in religion especially, is generally ascribed to want of imagination ; yet it is plain, on a little reflection, that great religious revivals such as those under St. Francis, St. Benedict, and Savonarola, were due to the excitable fancy of the masses on whom they wrought ; this is finely illustrated by a contrast between the slow and silent influence of the *Imitatio Christi*, a Northern work, on the Northern mind, and the effect of the preaching of St. Bernardino of Siena and St. John Capistran on the Southern temperament. This same tendency had its dark side in monstrous forms of hate, revenge, and even love, which only an overwrought imagination could keep alive ; in superstition (in which these people were veritable pagans even in the sixteenth century, with their belief in omens, witchcraft, ghosts, familiars, demons), which was a constant temptation to the grossest imposture. The study of the platonists led probably to that of the neo-platonists, and the writers on magic. A few voices were raised against it, among which was that of Pico della Mirandola, yet he was not free from a belief in the supernatural. All this superstition, which was very materialistic, begot doubts of a future life,—as extremes meet in their results,—which were fostered by antipathy to the Church and her teachings. With this came irresponsibility. Nevertheless Burckhardt believes that there was a strong substratum of real religion in the mind of the fifteenth and sixteenth centuries, or men could not have withstood the force of external conditions and the tremendous power of their own individuality, and Christianity and accountability must have wholly perished in Southern Europe. He is of opinion that if the intellectual impetus of the Renaissance had been allowed to run its rightful course, it would have overcome the debasing tendencies which beset it, but the influence of certain prominent persons, foreign conquest, and the Counter Reformation checked its career and drove it down instead of upward. He is very guarded, however, in his generalizations and deductions, and with consistent modesty dwells on the difficulty of making due

allowance for nationality, race, century, circumstance, and all the other elements which have to be taken into account.

The wonder of his work is, how justly he seems to have weighed and measured all these considerations ; that so comprehensive a view should have been taken of any country by a foreigner ; that so deep an insight, so broad a sympathy, should exist for a past epoch in a man of a different time ; that questions, involving issues so delicate, complex, and adverse, should be treated without prejudice or partisanship ; that his enthusiasm should never mislead him, nor his keenness turn to cynicism. His style is easy, simple, and pleasant ; he has the solidity and thoroughness of his countrymen, the acumen and picturesqueness of a Frenchman, the clearness and humor of an Englishman. Of the absorbing interest, the captivating charm of the main topic, as it appears in these pages, no review or abstract can give the feeblest notion ; we linger over them even when we have reached the last, and leave them with full acquiescence in the author's assertion that the Renaissance on the whole produced a symmetry in the development of individual man, and a harmony between him and the conceptions of a new and glorious art, which ennobled life as neither antiquity nor mediævalism had or ever could have done.

SARAH B. WISTER.

ART. VI.—CRITICAL NOTICES.

1. — *Unzeitgemäße Betrachtungen.* Von DR. FRIEDRICH NIETZSCHE, Ordentl. Professor der classischen Philologie an der Universität Basel. Zweites Stück : *Vom Nutzen und Nachtheil der Historie für das Leben.* Leipzig : Verlag von E. W. Fritzsch. 1874.

In this the second volume of his *Unzeitgemäße Betrachtungen*, Dr. Nietzsche shows a very warm feeling against some of the hobbies of the present day ; and while it is the unwise study of history that more especially excites his wrath, he takes occasion to denounce a great deal of the shallowness of modern culture. Certainly he makes

a very good showing. Humility is not one of the marked traits of this age, and it requires no supernatural illumination to detect traces of pretentiousness in modern thought and assertion. A disciple of Schopenhauer must be a very inapt pupil if he cannot find something to wail about, and he must also be very indifferent to half of his master's art if he cannot raise up his voice in tuneful lamentation. Leaving aside the merits of his philosophy, it cannot be denied that Schopenhauer's literary influence has been a good one in showing the Germans the advantages of an eloquent style, and his successors have been wise enough to imitate their master in this important matter. Nietzsche writes well, and, except for occasional, almost incoherent bursts of denunciation, his book is very readable. At times, it must be said, his passion is in lamentable tatters. Those who can be patient with his oratorical excesses, however, will find much to repay them; certainly Nietzsche gives his readers food for thought, even if he fails to convince them that he has put his finger on the source of all our troubles.

As we have said, he denounces the excess to which we carry the study of history. He does not affirm that we should wholly abandon its pursuit, but that, carried too far, it destroys the intellectual soundness of individuals, and so of nations and civilizations. Before explaining the method by which such havoc is caused, it will be allowable to make mention of the circumstances under which historical investigation can be commended. In the first place, knowledge of history is of use to the active men who fail to derive consolation and instruction from their contemporaries. Such persons will get their pleasure from reading about the nobly endured persecutions of previous great men, but they run the risk of fancying that the future will bring to pass the exact conditions of the past, — an error which is to be carefully guarded against.

The study of history is also of service to a second class, those, namely, who need to have their emotions of piety and of patriotism encouraged and directed by knowledge of all that has gone to the making of their country, to the establishment of its liberties, to preserving it from its enemies, etc. Those who pursue historical studies from this impulse, learn the value of the hard-won benefits they so easily enjoy; they must be cautious, however, and avoid a too superstitious regard for what is unvenerable in the past. A third benefit, one, too, which is very liable to pass into harmful exaggeration, is to be got from the critical study of history, which shall help to rid us of the errors of the past. Such, much condensed, are the benefits to be derived, according to Nietzsche, from history. He is more eloquent about the harm it does.

The charges he brings against modern culture are, for the most part, well deserved. He sees in the modern man of to-day a creature of whom it can be more truly said that he knows about cultivation, than that he is cultivated. Our culture, he says, gets no further than thinking and feeling about culture, it never rises to any determination about culture. An ancient Greek would be obliged to confess that a man of to-day has historical culture ; but if he were to say that a man might be cultivated so far as possessing education goes, and yet be without inner culture, he would find no one to agree with him. Modern culture depresses the force of individuality. Like civilization it tends to produce uniformity ; opinions in all æsthetical matters are echoed like vapid platitudes. The knowledge we have of the past gives us the power, or makes us think we have it, to judge critically of the present. For the enthusiasm necessary for the accomplishment of any task we substitute prophetic knowledge of the little to which it would probably amount if the attempt were made to carry it out. If anything is suggested to us, instead of trying to do it, we feel our pulses, look at our tongues, and write accounts of the way the proposal affects us. We have become self-conscious to an extent which was unknown to our ancestors ; we demoralize ourselves and those about us by looking at everything in an ironical spirit. Such are some of the most noticeable characteristics of the present day, and, unhappy as they are, they are the result, according to our author, of excessive historical training.

How justifiable it is to put the blame on history, and to expect the cure from less ardent devotion to historical study, is a different question. That Nietzsche is in the main right in his fault-finding, it would be hard to deny. Every one is conscious of, or can perceive with a little reflection, the intense self-satisfaction which culture pours into the hearts of those who are fortunate enough to possess it. It brings with it the lulling delusion that the cultivated man can no longer be caught by pretentious shams as were our ancestors when the world was young ; and proud of this opinion, he looks condescendingly on others, thinking he alone has guessed the secret of life. But how can he be taught better ? There is one thing to be learned from the much-abused study of history, and that is that a change of such moment can no more be effected by good advice than it can be by legal authority. It would be impossible now to abandon the study of antiquity. That has become one of the essential conditions of modern life ; one might as well try to annihilate our past, as to destroy our interest in it. There is one thing we need not do, and that is despair of the world yet. It will probably survive even the con-

temptuous indifference of those who at present inhabit it. What is to be done is to bear up under our historical knowledge, and, assimilating that, to look with such wisdom as heaven may have given us, or our study taught us, at what in life is yet unsettled. As Nietzsche says, the Greeks learned to "organize chaos," by devoting themselves to cultivating what they had within themselves, and not, as we do, by neglecting that, and accumulating numberless facts and statistics about other people.

This outburst of Nietzsche's, with all its exaggeration, is timely and interesting. He sounds a much-needed note to interrupt the tiresome flattery and self-congratulation with which it is the fashion to speak of the present day. His book deserves reading and consideration.

2.—*Urkunden zur Geschichte des deutschen Rechtes für den Gebrauch bei Vorlesungen und Uebungen.* Herausgegeben von HUGO LOERSCH und RICHARD SCHROEDER, unter Mitwirkung von ALEXANDER REIFERSCHEID. I. *Privatrecht.* Bonn: Adolf Marcus. 1874.

THIS work offers a very suggestive example of German university instruction. The method consists in making practical exercises in legal cases keep pace with theoretical instruction in abstract rules. It has produced excellent results in Germany, as it has in America where, as in the Harvard Law School, it has taken root and flourishes. As yet neither England nor America have fairly conceived of treating private law as a purely historical university study, although it must be evident to the most superficial observer that there is nothing in history which has so much intrinsic value as law, seeing that mankind has created nothing but its law for the foundation of society. In Germany the study of law is habitually pursued from the historical point of view, and the volume above mentioned is a specimen of the mode of treatment. It fills an important gap in the study of Germanic law, which, as must always be kept in mind, is, for the most part, either through the Normans or Anglo-Saxons, an integral part of English law. This collection is intended to put under the historian's eye a series of documents arranged in an order that is at once chronological and systematic. Hereafter it will be easier to form a more clear and life-like idea of the development of institutions in the face of the monuments that reflect them. A similar work has been done for English constitutional law by Mr. Stubbs in his *Select Charters*. Thus, little by little, something approaching to system and organiza-

tion is introduced into a branch of knowledge which has hitherto been open to the reproach of satisfying itself too easily with abstractions, and *a priori* methods are every day losing ground.

In order to carry out with success the work they have undertaken the authors have rigorously circumscribed its limits and defined the method. They have confined themselves to German private law, though offering the prospect that the public law too will have its turn. They have admitted only concrete cases borrowed from the actual life of the time, and have presented only complete documents, keeping scrupulously to those which are anterior to the fifteenth century, that is to say, anterior to the reception of Roman law in Germany; because that reception, as is well known, marked the decadence of Germanic law, and arrested its original, proper, and, so to speak, organic life by putting an end to its development. From the popular period we pass to the learned period; study at the universities succeeds instinctive creation and practical acquaintance with precedents.

It must not however be supposed that this collection is useful only to the advanced student in legal history. Original works will be compelled to have recourse to it, for a number of hitherto unedited documents are published here. It begins with the principal formulas used in the Frankish Empire, and continues with documents of the most different kind, dated as exactly as possible, starting with the 25th February, 703. The name of Dr. Schroeder, already known to readers of this Review (October, 1874), is a guaranty for the exactness of the rapid explanations given here and there on papers especially difficult to interpret. Each number over every document is followed by a precise indication of what it contains and of its previous publication, if it has been published before. References are also made to the latest and most important works which have treated of the institution illustrated by the document. In view of the bad condition in which some of the early mediæval texts have reached us, Messrs. Loersch and Schroeder thought it advisable to associate a philologist with them to reduce to precise rules all the different interpretations hitherto given to doubtful passages or varied readings. Therefore they charged Mr. Reifferscheid with the philological part of their task, with a degree of success that will satisfy any student who is curious enough to compare his texts with those of any previous publication.

The work is certain to be warmly received by the large school of students in Germanic institutions. American and English professors of history will, however, feel their usual momentary pang of jealousy

or discouragement, when they see that the book bears its inevitable dedication to an old and honored teacher, Georg Waitz, on the occasion of his twenty-fifth "Jubelfeier." When may the oldest and most honored American professor of distant centuries begin to hope that one student of his will ever remember him or his "Jubelfeier," or dedicate so much as a penny pamphlet to its honor?

3.—*Grundzüge der physiologischen Psychologie.* Von WILHELM WUNDT. Leipzig: Engelmann. 1874. 8vo. pp. 870.

ON every hand, no less in Germany than in England, there are signs of a serious revival of philosophical inquiry; from a quarter, too, which leads one to indulge the hope that real progress will ere long be made. For it is the men engaged in the physical sciences who are now pressing hard in the direction of metaphysical problems; and although in a certain point of view their education may not specially qualify them for the task, it would be sheer folly not to expect from their trained cunning in experiment, their habits of patience and fairness, and their willingness to advance by small steps at a time, new results of the highest importance.

Nowhere is the new movement more conspicuous than in psychology, which is of course the antechamber to metaphysics. The physiologists of Germany, devoid for the most part of any systematic bias, have, by their studies on the senses and the brain, really inaugurated a new era in this science. Where quasi-scholastic distinction and nomenclature were the only instrument of advance, we now find measurements and objective reactions to help us on our way. And in the main, whilst in France thoroughly, and in England still faintly, the old jealousy between the objective and the subjective methods survives, the one as patronized by religious, the other by materialistic speculation, we find that in Germany the minds of the best investigators on either side are wholly unpreoccupied with any such militant consciousness. The spiritualist Lotze is as hearty a physiologist as the materialist Moleschott; while it is hard to guess from the psychologic contributions of Fechner, Helmholtz, Mach, and Horwicz, what their theologic or anti-theologic bias may be, or if they have any at all. This detachment of mind is very healthy, and is in striking contrast with what such writers as Mill, Maudsley, and Huxley show us in England, and McCosh and Porter in this country. But even here we find in Hodgson and Lewes the beginning of a new era of temper, destined

surely to be more fruitful than the old régime of unfairness and recrimination.

The Heaven-scaling Titans have had their day in Germany, and the confident systems lie in the dust; for the school-boy performances of a Haeckel and the sensational paradoxes of a Hartmann cannot count as philosophy. A season of headache and apathy, with bald *Empirie*, the mere registration of facts, for a diversion, ensued, as was natural after such a metaphysical debauch. There is something almost dramatic in the way in which the thirsty spirit of man is seen to be regaining its normal appetite again, and with its new desires, indulging in new hopes. Only maturity has brought circumspection, and the old rash notion of scaling the opaque walls of existence by a quick *coup de main*, and ravishing the secret within in an instant, has been given up. The method of patience, starving out, and harassing to death is tried; Nature must submit to a regular *siege*, in which minute advantages gained night and day by the forces that hem her in must sum themselves up at last into her overthrow. There is little of the grand style about these new prism, pendulum, and galvanometer philosophers. They mean business, not chivalry. What generous divination, and that superiority in virtue which was thought by Cicero to give a man the best insight into nature, failed to do, their spying and scraping, their deadly tenacity and almost diabolical cunning, must some day accomplish.

Such as they are, Professor Wundt, the title of whose latest work heads our article, is perhaps their paragon; and his whole career is at the same time a superb illustration of that thoroughness in education for which Germany is so renowned. In that learned land Browning's fable of the Grammarian's Funeral is re-enacted every day. Poor Waitz, for instance, who died a few years ago with his monumental *Anthropologie der Naturvölker* unfinished, began that work merely to educate himself for the study of psychology and the philosophy of religion. Wundt is more fortunate than Waitz, for he has at last reached, at Zürich, the goal he evidently strove for from the first, a University Chair of Philosophy. Still young, his apprenticeship is over and the fruit is to be reaped. But what an apprenticeship! To be Helmholtz's colleague as professor of physiology at Heidelberg; to spend years in a laboratory and to publish numerous elaborate experimental researches; to write a large treatise on Physics, and an admirable handbook of Physiology (both of which have had several editions and been translated into French), besides two volumes of lectures on Psychology, an essay on the law of causation, and various fugitive articles; to study each new subject by giving a year's

course of lectures upon it,—these are *preparations* on a scale rather fitted to cool than to excite the ardor of an American neophyte in philosophy.

Nevertheless Wundt has now laid them behind him, and in this compactly printed volume he takes, so to speak, an account of stock before embarking on his new career. The work certainly fills a *lacuna*, and circumscribes in a very convenient way all those phenomena of human life which can be studied both by introspection and by objective investigation. The anatomy and physiology of the nervous centres and organs of sense occupy about one third; the natural history of sensations, pleasures, and pains, and perceptions spatial and temporal, follow; and analyses of the aesthetic, volitional, and self-conscious life conclude. The style is extremely concise, dry, and clear, and as the author is as thoroughly at home in the library as in the laboratory, the work is really a cyclopaedia of reference. If, through a large part of it, the reader finds that physiology and psychology lie side by side without combining, it is more the fault of the science than of the author. He has registered no detail without doing his best to reduce and weave it in with the mass. Indeed so uninterrupted is his critical elaboration, that we can think of no book (except perhaps the "Origin of Species") in the course of which the author proounds so many separate opinions.

Their multiplicity forbids our even attempting to give an account of them. But we may single out one or two for notice. Every one has heard of the measurements of the velocity of nervous action which Helmholtz inaugurated. Wundt, after having worked at the subject experimentally for fourteen years, with interruptions, may fairly claim to have brought it for the present to a conclusion. The principle is this: a signal is given to the subject who, immediately on its reception replies by closing an electric key. The instant of the signal and of the closure are chronographically registered, and the time between them ascertained; and according to the circumstances of the experiment this time undergoes some very interesting variations, whose interpretation by Wundt seems to us particularly felicitous. In a previous chapter on Attention and Consciousness, he has adopted a convenient nomenclature which really is something more than a metaphor. "If we say of all the representations present to the mind at any one time that they are in the *field of vision* of consciousness, we may call that part of them to which the attention is particularly directed the *inward point of sight*. The entrance of a representation into this inner field of vision may be called Perception; its entrance into the focus or point of sight, Aperception."

(p. 717.) Now the latter act is often a volitional effort on the part of the subject, a focusing of the attention upon the impression, which adjustment occupies a distinct interval of time. This interval is a part of the time registered in the experiments just referred to. It, *plus* the time occupied in the volitional innervation of the motor nerves which provoke the movement by which the key is closed, are called by Wundt together, the *time of reaction*. It is this interval of psychical activity which is variable according to the experimental conditions. The other subdivisions of the total time, that of transmission from the organ of sense to the brain, that of "perception," and that of transmission to the muscle, are probably invariable. Now the experimental circumstances which shorten the time of reaction are mainly those which define beforehand as to its quality, intensity, or time, the signal given to the observer, so that he may accurately expect it before it comes. The focusing of the attention takes place under these circumstances *in advance*. Where, for instance, we are warned preliminarily by a slight sound that the signal is going to occur, the registered time is reduced to a minimum. The attention, in other words, "is so exactly adjusted to the entrance of the signal into the inner field of vision, that at the very instant of perception, apperception likewise occurs, and with apperception, the volitional mandate." More remarkable still! the time registered may be reduced to zero, that is, the signal may be given and the key closed at objectively the same instant, so that not only the "reaction-time," but also the physiological duration of nerve transmission to and from the brain are abolished. This paradox amounts to saying that the impression is apperceived before it actually occurs, or that expectant attention is equivalent to objective stimulation.* And the same phenomenon is made even more strikingly manifest by another set

* The reason why, in these not very frequent cases, we do not notice the signal *twice* (once as apperceived in advance by our spontaneous attention, and once passively after it has occurred) is probably to be sought in another series of experiments which show that one act of apperception, if it be at all intense, prevents the apperception of other nearly simultaneous impressions. This is by virtue of what Wundt calls the "law of discrete flow" in representations. "Attention demands a certain time to pass from one impression to another. As long as the first impression lasts the entire attention is bent upon it, and cannot, therefore, focus itself in advance, in order to apperceive the second impression at the very instant of its occurrence." The second will then either be apperceived late, or abort, unless indeed it can coalesce in one conception with the first. Of all impressions "perceived," none are remembered for more than a minute, except those which are "apperceived," or brought to the inner focus. In the case related in the text, the *real* impression may either abort (pass unnoticed, unapperceived) or it may coalesce with the imaginary one.

of Wundt's original investigations, which we have not space to describe.

We select these particular researches for notice because they demonstrate as it were mathematically what empiricists are too apt to ignore,—the thorough-going participation of the spontaneous mental element in determining even the simplest experiences. The *a posteriori* school, with its anxiety to prove the mind a *product, coûte que coûte*, keeps pointing to mere "experience" as its source. But it never defines what experience is. *My* experience is only what I agree to attend to. Pure sensation is the vague, a semi-chaos, for the *whole* mass of impressions falling on any individual are chaotic, and become orderly only by selective attention and recognition. These acts postulate *interests* on the part of the subject,—interests which, as ends or purposes set by his emotional constitution, keep interfering with the pure flow of impressions and their association, and causing the vast majority of mere sensations to be ignored. It is amusing to see how Spencer shrinks from explicit recognition of this law, even when he is forced to take it into his hand, so to speak. Mr. Bain, in principle, admits it, but does not work it out. The only English-writing empiricist who has come near to making any use of it is Mr. Chauncey Wright, in his article on the Evolution of Self-Consciousness in this Review for 1873.

Another section important to English readers is that devoted to touch, vision, and the cognition of space. Wundt's account of vision is unapproached by anything in our language for thoroughness and subtlety. His conclusion as to the nature of our notion of space is in one word this: "It is the resultant of a distinct psychologic process, which may be called a *synthesis*, because the evolved product shows properties which are not present in the sensuous material used in its construction." That is to say, our *intuition* of space within the limits in which it exists—a very different thing from our *idea* of space, which has no limits—is that of an undivided *plenum*, a perfectly simple and specific *quale* or affection of consciousness. Whether this new quality of feeling once arisen is *fertile*, that is, whether it be analyzable into different elements from those by whose synthesis it arose, giving us new relations, new propositions concerning them, propositions not merely expressive of the *particular* tactile, retinal, and muscular experiences that generated the form of intuition,—this is not decided by Wundt, nor do we here affirm it. To prove it would be essentially to reinstate the Kantian philosophy, that is, to vindicate for the mind not only a native wealth in forms of sensibility,—every empiricist must admit

that! — but the possession of forms with synthetic judgments involved in them.

Wundt's term "synthesis" reminds one of the term "mental chemistry" used by the Mills, or rather admitted into their works, but not used; for both they, Bain, and Spencer are so desperately bent on covering up all tracks of the mind's originality (especially in this field of space, preoccupied by Kant), that they utterly repudiate mental chemistry here, and labor with an energy worthy of a better cause to procure out of mere "association" something never given in any one of the ideas associated, something which after all they have to *escamoter* out of their sleeve as it were, or, in the absurd Spencerian fashion, to call "nascent," and trust that, in that seemingly infantile and innocent guise, you will take no alarm at its intrusion.

We are not at all concerned with the ultimate philosophical bearings of this particular question. Settle the particulars, and philosophy will take its turn. But to be so bribed beforehand by philosophical antipathies as to ignore evidence and shirk conclusions, is a poor business for either psychologist or physiologist.

The notion of mental synthesis or chemistry opens the way to interesting questions. Hitherto most thinkers have admitted that in a state of consciousness the *esse* and the *existere* were one and the same thing, namely, the *sentiri*. In the conscious sphere reality and phenomenon, substance and accident, nature and property, cannot be distinguished as they are in the objective sphere. A thought has only one mode of being at all, namely, as that very thought. *It* cannot become a different thought, nor can it cease to be *thought* without ceasing to *be* altogether. But in the material world, that which we call one and the same thing, a *leaf*, for instance, has relations, and differs according to the point of view. It was green and is now brown. It is a product of chemical forces, a reducing agent, a form of beauty, an effect of luminiferous ether, an affection of my sensorium each in turn, and yet preserves what we call its identity throughout.

Now when, in this matter of space, we see feelings of innervation and retinal impressions combining into a novel *quale* of consciousness, what are we to say? Do *they* really exist within the new *quale*, or, in other words, have they, in addition to their simple *sentiri*, another existence, a sort of objective substantiality which may betray itself by producing effects, — we being conscious of the effect, but no longer of the original feeling? Or is the process a logical one, the simple feelings being really "perceived" by the mind, but only used as signs to suggest the higher product, that alone being "apperceived," whilst the signs are unnoticed and forgotten? Or, thirdly, have the

simple feelings never existed at all as feelings, and has the resultant intuition of space a purely physiological antecedent, in the shape of the *combined* nervous action, whose components, when they were separately excited, corresponded to the retinal and other feelings? These problems lie over the whole field of psychology, and are worthy of explicit discussion.

Wundt does not deal with them at all, except by implication, as above. Neither does he seem ever to have entertained the hypothesis advanced by several English writers recently, that conscious states have no dynamic relations either with each other or with the nervous system. He assumes throughout that feelings as such may combine with each other (as we have just seen in regard to space), and that they may also act as nervous stimuli. We think, for our part, that the Englishmen (only two of whom, Hodgson and Clifford, have deigned to give reasons for their belief) are prematurely dogmatic. Taking a purely naturalistic view of the matter, it seems reasonable to suppose that, unless consciousness served some useful purpose, it would not have been superadded to life. Assuming hypothetically that this is so, there results an important problem for psycho-physicists to find out, namely, *how* consciousness helps an animal, how much complication of machinery may be saved in the nervous centres, for instance, if consciousness accompany their action. Might, for example, an animal which regulated its acts by notions and feelings get along with fewer preformed reflex connections and distinct channels for acquired habits in its nervous system than an animal whose varied behavior under varying circumstances was purely and simply the result of the change of course through the nervous reticulations which a minute alteration of stimulus had caused the nervous action to take? In a word, is consciousness an economical *substitute* for mechanism?

Wundt's book has many shortcomings, but they only prove how confused and rudimentary the science of psycho-physics still is. More workers and critics are wanted in the field, propounders of questions as well as of answers. Whoever they may be, they will find this treatise indispensable for study and reference. All we have cared to do has been to call attention to its importance and to the merits of its singularly acute and learned author.

4.—*Histoire des Paysans.* Par EUGÈNE BONNEMÈRE. Seconde édition, entièrement réfondue et considérablement augmentée. Paris : Sandoz et Fischbacher, Éditeurs. 1874. 2 vols. 12mo.

By the term *peasantry* is understood a class of tillers of the soil : a class, because the peasants are born to their condition, and any change in occupation or in dignity is with them an exceptional thing. Not a class of agricultural laborers, because a laborer is one who works for wages ; while peasants — so they work with their own hands — may be of all grades, from the serf of Russia, and the day-laborer of England, to the metayer of Italy, the peasant-proprietor of France, and the *Bonde*, or yeoman, of Sweden, who forms the fourth estate of the realm. There can be no peasantry, therefore, in a country like the United States, where those that till the soil do not form a class. Neither, we should think, is the term applicable in primitive communities like those of the early Germanic nations, which are essentially agricultural and at the same time purely democratic in their social organization. So, too, with communities developed out of states of society like these; as, for instance, that of ancient Rome. By the side of an aristocracy like the Roman patriciate, which deemed cultivating the soil with one's own hand the only form of manual labor which was not degrading, — in which the story of Cincinnatus was possible, — there could be no peasant class. A peasantry must be the accompaniment of an idle or a moneyed aristocracy.

The peasantry is the most numerous class, and that whose functions are most fundamental in the economy of society : its history therefore is inferior in interest and importance to no other branch of social history. To write it, however, with any approach to completeness, is impossible in the present stage of historical inquiry. The origin of this class belongs to times of which we have but scanty knowledge ; and its subsequent condition and vicissitudes can be satisfactorily explained only in connection with its origin. This explanation must come, if at all, through those investigations into the primitive institutions and usages of society which have of late attracted so much attention. In especial we must have recourse to whatever throws light upon the primitive tenure of land, or on the origin and growth of feudalism. For the land, as well as the aristocracy, is essential to the existence of a peasantry.

M. Bonnemère has therefore judiciously undertaken, not a history of the *peasantry*, but of the *peasants*, — a simple and easier task, in-

asmuch as it implies — or may be construed as implying — rather the individuals than the class, and is therefore capable of a far more external and superficial treatment than would be expected from the other title. As is natural, he has confined his attention to France ; he has given a full and graphic sketch of the history of the French peasants, their condition and sufferings, and their several efforts at resistance. But it is not a history of that organic body or class which we call the French peasantry, — its origin, organization, and legal relations. It is impossible, for instance, to get from this book a complete and exact idea of the relation of the several groups of the peasantry to each other and to their lord ; the organization of a *seigneurie*, for instance, its agricultural administration and judicial system.

Even the sketch of the social condition of the peasants is incomplete, in that their incapacities and wrongs are described with an eloquent pen, but the brighter side of the picture — which certainly existed — is left almost untouched. Any person who wishes a lively picture of the numberless outrages and atrocities which marked the intercourse of the feudal with the *roturier* class, will find ample material here. There are also some suggestive pages describing the relations between the rural and the civic communities in their struggles against their feudal lords, — an aspect which is not at all familiar, but which M. Bonnemère has shown to possess great importance. We are accustomed to conceive of the enfranchisement of the communes as an exclusively civic movement. He shows that the movement spread to the rural communities, and in a few instances with some degree of success ; but that it failed of general success by reason of the poverty, isolation, and low culture of those who took part in it. Now the towns, — whose citizens, it must be remembered, belonged to the *roturier* class, — after obtaining their own franchises, and entering upon the enjoyment of local self-government, stood aloof from their rural brethren, who were engaged in struggling for the same liberties. Nay, they even helped to crush them : for these city communities were themselves proprietors of landed estates, cultivated by serfs ; their warfare with the barons made them, as it were, the peers of the barons, and raised them still higher above the unfortunate peasantry : and in this warfare, again, it was the peasantry that had to endure the devastations and cruelties of both belligerents. This was a suicidal policy on the part of the cities. In the heat of the contest with their feudal enemies, it isolated them from their natural allies, the villein class ; forced them to buy support from the king, and thus led speedily to the suppression of their own liberties.

Nevertheless, this policy, suicidal as it was in the long run, was

not wholly unaccountable or inexcusable at the time. The French villeins did not, like the English, compose a compact, organized body, but were destitute at once of effective fellowship and of leadership. Their very origin, so far as it can be traced, distinguishes them broadly. The English peasants were an essentially homogeneous body of men, the descendants of the Angles and Saxons who planted colonies in the fifth and sixth centuries. They were freemen by origin and by tradition. The French peasantry, as Guizot has pointed out, are the offspring of long generations of serfs and slaves : not to the Middle Ages alone, nor to the Frankish conquest, nor even to the Roman conquest of Gaul, do we look for its source ; even the Romans found Gaul cultivated by a servile class. Hence it is that the French peasants were in an infinitely lower state than the English. Mr. Hallam, after defining the two classes of villeins, — *in gross* and *regardant*, — goes on to say that in England “one only, and that the inferior species, existed” (Vol. I. p. 198). In this he appears to be only half right. In England, as he elsewhere shows, there was no difference in the legal relations of the villeins : and further, as he himself goes on, two pages afterwards, to remark, “it was only in respect of his lord that the villein, at least in England, was without rights” ; and in the eighth chapter he describes the condition of the English villeins in terms very different from those used by the author of the work before us in relation to even the higher class of the French villeins.

What is, however, of even more importance than the more favorable condition of the villeins, is that of the class above them, — the free tenants. There were free tenants in France as well as in England ; but there was no class of *freeholders*. The French *seigneurie* did not differ essentially in its constitution from the English *manor*. Each was divided into its demesne lands and its tenement lands ; and the tenement lands of each were occupied partly by free tenants and partly by villeins. But the free tenants, the *censitaires* of the French institution, were as completely deprived of what we should now call political rights, as their neighbors of inferior degrees, the villeins and serfs. They were subjects of their lord, as well as tenants ; and so were the English socagers. But the English lord of the manor was, so to speak, a constitutional ruler ; his subjects had a share in the administration ; his feudal court — the court baron — was composed of its suitors, the freehold tenants (and sometimes even customary tenants or villeins) ; they gave the verdict, which the lord and his steward could only register. But the French lord was an absolute ruler ; he exercised jurisdiction by his own sole

authority, and his tenants — as well free as servile — had only to accept his judgment.

More than this, the French peasantry stood in none but a feudal relation to the land in which they lived. The memory of the great Frank Empire, and the great King Charles, who had ruled it as a national and sovereign ruler, had perished. The peasant, whether freeman, villein, or serf, belonged to a *seigneurie*, and it was only through its lord, an absolute lord, that he stood in any relation to the rest of France. In England, however oppressive the lord of the manor might be, still his tenants had other relations than to him. Every freeholder was, by virtue of his position, a member of the court, both of the hundred and of the county, and was thus, from the moment when knights of the shire were elected to represent the landed interest, invested with genuine political rights. Not only this, but even the villeins chose their own reeve or foreman, and were represented in these same courts by him and four of their own number. It is impossible to overestimate the consequences of this difference. The French communes naturally enough did not care to affiliate in any way with a class so contemptible ; but the English boroughs and even the lesser barons were willing to make common cause with a class of whom the yeomen were the representatives.

We have perhaps sufficiently characterized M. Bonnemère's book. It is hardly doing justice to its qualities as a readable book, to say that its chief value is as a collection of materials ; and yet this is strictly correct, so far as a history of the *institution* of the peasantry is to be considered. It is, as we have shown, somewhat one-sided and incomplete ; there is a great deal of repetition in it, and a great monotony in telling over and over again the same story of wrongs and of ineffectual resistance ; there is a lack of central thought about which the facts are grouped ; with great industry and learning, there is a want of familiarity with the results of the latest scholarship, as evinced in the statement (Vol. I. p. 31) that the Franks systematically despoiled the proprietors of land in Gaul. With all this, it contains valuable collections of facts, well grouped under distinct heads.

The closing chapter, “*Vie privée des paysans et situation de l’agriculture*,” gives an interesting account of the agricultural communities of the Middle Ages in France, and the remnants of these which still survive. The author shows that these communities were very widespread in the Middle Ages, and were a very salutary institution. Their origin he ascribes to an imitation of the monastic associations ; of their organization he says very little, perhaps from the

paucity of testimony. It is just at this point, however, that we should be glad of additional light. The relation of these communities to those described by Von Maurer and Haxthausen in Germany, and by Nasse and Maine in England ; how far they were recognized by the law ; what class of the peasantry belonged to them,—these and similar questions, which present themselves as one reads the chapter, find no sufficient answer in it. Indeed, it is a good example of what we have pointed out as the chief defect of the book, that this important topic is reserved for a kind of appendix, rather than introduced where it belongs, as a part of the social organization of the Middle Ages.

5.—*La Religion Romaine d'Auguste aux Antonins.* Par GASTON BOISSIER. Paris : Librairie Hachette et Cie. 1874. 2 vols. 8vo.

THE religious history of the ancient Romans falls into two very distinct epochs. The first is that of their native faith, a very peculiar and characteristic one, of course more or less affected by external influences, but still in the main an original growth of the Roman mind. With the powerful intellectual influence exerted by contact with the Greeks in the second century before Christ, there came a remarkable transformation. The Greek theology was not consciously and voluntarily substituted for the Roman : there was no thought of introducing new beliefs and ceremonies in place of the old, or even of adding anything admittedly foreign ; but the two religions were deliberately identified. Every Greek divinity, it was thought, must have his counterpart in the Roman pantheon ; and where this counterpart could not be readily recognized, some pains and ingenuity were exerted to make out an identity. Jupiter was clearly enough Zeus ; Minerva possessed the most striking attribute of Athena ; Neptune and Vulcan were at once seen to be the same as Poseidon and Hephaestos : but it was only by a very liberal construction that they could find a representative for Aphrodite in Venus, and for Dionysos in Liber. For Apollo and some of the lesser divinities there was no attempt made to find an equivalent.

Now the peculiarity of this identification was that a system of most attenuated personalities — almost pure abstractions — was brought in connection with a set of gods who were completely individualized, as thoroughly human in their attributes as their worshippers themselves. As the process did not consist in introducing or substituting Greek deities, but was simply one of identification, it followed that the human attributes of the anthropomorphized Greek gods were in-

grafted upon the abstractions which the Romans called gods. The Romans came actually to believe that their stern and just Jupiter had been guilty of the cruelties, frauds, and amours which the Greek poets related of their Zeus. The revolution thus effected in the Roman religion was far greater than any other which it experienced until itself supplanted by Christianity. Its form and nomenclature were unaltered, but its character was totally changed. It was the Greek religion under Roman names.

It is only the second of these periods that comes within the scope of M. Boissier's work. At the accession of Augustus the transformation of the Roman religion had been completely effected ; it was from the poets of the age of Augustus that modern writers have derived that medley, under the name of Mythology of the Greeks and Romans, to which Greece contributed substance and Rome nomenclature and final shape. It does not come in his way, therefore, to speak much of the process of transformation, still less of the Roman religion before the transformation ; he has given us an admirable account, based upon genuine scholarship, and characterized by genuine French elegance, of the religion of Rome as it existed in this period, and more particularly at the two epochs which mark its commencement and close,—the reign of Augustus and that of the Antonines. The whole first book is devoted to the reign of Augustus, Virgil being in this part the special object of attention ; the second book treats of the religion and philosophy of the reigns following that of Augustus, and here Seneca is the most prominent figure ; the third book is more general, describing society in the time of the Antonines,—the upper classes, the lower classes, the women, and the slaves.

There is, however, a short introduction of seventy-five pages upon the Roman religion in general, and its condition at the close of the Republic ; and in the first of these chapters, the author touches slightly upon the peculiar character of the native Roman religion, before its fusion with the Greek. This chapter is excellent, like the rest of the book ; but we are inclined to differ from the view taken by the author of the fundamental conceptions of the Roman religion. He is no doubt correct in taking the gods of the *Indigitamenta* as especially typical of these conceptions. Other countries, he says, have experienced, as well as the Romans, "the need of placing the principal acts of life under the divine protection, but in most cases well-known, powerful, familiar [*éprouvés*] gods have been chosen for this office, in order that their succor might be efficacious. It is the great Athena, the shrewd Hermes, whom the Greeks invoked, in order that the child might become clever and wise. At Rome

special deities were preferred, who were created for this very purpose and have no other use; there is the one who causes the infant to raise his first cry (*Vaticanus*), and the one who causes him to pronounce his first word (*Fabulinus*); both of these have no other function, and are invoked only on this occasion" (Vol. I. p. 4), etc. Then he goes on to interpret these gods of the *Indigitamenta* as, not distinct deities, but only special functions of "the divinity in general, the heavenly father, *divus Pater*." "Thus this god *Vaticanus* and this god *Fabulinus*, of whom we have just spoken, would be nothing but the divinity itself, taking upon itself to watch over the first cries and the first words of a child." (p. 6.)

This appears to us to be a complete inversion of the correct view. The gods of the *Indigitamenta* were not derived from the gods of heaven, but, on the other hand, the great Roman gods were derived from deities of precisely the nature of those of the *Indigitamenta*; as, for instance, Liber, Libera, Libitina, Lucina, and Murcia, probably also Saturnus, belonged primarily to this series, and were only by degrees advanced to the rank of personal gods. The question here raised is, to be sure, the old controverted point, whether polytheism is derived by a process of development from fetichism, or by a process of degeneracy from a primitive monotheism. We hold decidedly to the former view.

M. Boissier calls attention (p. 8) to certain remnants of fetichism which survived in the Italian religion, — "here it is under the form of a lance planted in the ground that they adore the god Mars, elsewhere a simple stone represents the great Jupiter," — explaining them from the incapacity of the Roman to form a distinct conception of his gods, on which account he was obliged to symbolize them in this way. But surely this is a very one-sided interpretation of these fetichistic features, which, by the way, are found in the Greek and even in the Hebrew religion, as well as the Roman. They do not belong to the Roman religion in the stage of development at which we know it, but is a survival of an earlier period. With the Egyptians and Assyrians the fetichistic element assumed animal forms; they advanced to the conception of personal gods, but these personal gods were only half anthropomorphized, and carried round the heads of cats, dogs, and birds upon human bodies. The Greeks and Romans, on the other hand, left fetichism completely behind them, only retaining certain fragments, with symbolic associations, like those mentioned above. Both nations alike outgrew the low conception of a special deity for every act and process of nature; nevertheless this conception was the source from which the higher and more scientific

idea was derived, and certain features of this lower form of belief were still retained. But the religion of both Greeks and Italians marked distinctly a step towards scientific precision. Acts and processes were classified and grouped, and assigned to appropriate gods ; they had not yet advanced so far in scientific conceptions as to assign all to one and the same divine power ; it was a great step to analyze them, classify them, and distribute them among a limited number of divinities with specified powers, instead of an infinity of momentary and local divinities.

At this point the Greeks and Romans diverged. Each had created a certain number of gods, each of whom possessed limited and specific functions. The Greeks now, with their marvellous poetic imagination, proceeded to invest these gods with a really human personality. The gods and goddesses of the Greek Olympus may have each been marked by a higher degree of such and such a quality, so that Athena is called the goddess of wisdom, Ares of war, Poseidon of the sea ; but they were no more than men and women mere bundles of qualities. Athena is the tutelary deity of Athens, Ares had a love-affair with Aphrodite, Poseidon built the walls of Troy ; all three take an active part in the Trojan war, and are as completely human as Hector and Achilles, in complexity as well as limitation of character. Their very names have lost all suggestive power, and might equally well be those of men and women.

The Romans, on the other hand, stopped short of the anthropomorphic stage, — hardly going further in it than to individualize their deities by masculine and feminine appellations, which are almost always as descriptive of their functions as those of the Greeks are the reverse. Their gods are no mixture of qualities ; Jupiter is always *optimus maximus*, Vulcan is nothing but fire, Ceres nothing but the earth. We do not deny that there is a certain mixture of characteristics in some of the Roman deities, — the rural deities in particular. Faunus and Silvanus, for instance, approach, although at a distance, the character of the Greek divinities. But in general the Roman gods and goddesses are as purely abstractions as Faithful and Hopeful, Mr. Byends and Mr. Facing-both-ways. From this arise the peculiar characteristics of Roman mythology, and what we have called its essentially scientific character, as compared with that of any other ancient nation.

The two most marked characteristics of the Roman theology are their fondness for deifying abstract qualities, and their readiness to conceive a special god for special acts of great importance. The first of these is a clear illustration of the point we have been mak-

ing. The temples to Honor, Virtus, Pavor, and Pallor, Fortuna and Pudicitia, illustrate that capacity of generalizing, and of reducing all actions to law, which all admit to be a marked characteristic of the Romans. The second is a relic of the lower stage, represented by the gods of the *Indigitamenta*, who are themselves intermediate between fetichism and polytheism. Ajus Locutius, who warned of the approach of the Gauls; Deus Rediculus, who caused Hannibal to turn back,—gods like these are but a step beyond the fetich.

The rest of the chapter under consideration is excellent in every way; especially that portion of the second section which treats of the relation of Church and State in ancient Rome. This is in general a development of Cicero's eulogy upon the founders of the state for placing the religious and political functions in the same hands. We will add that this wisdom consisted especially in the point that the state religion was administered by statesmen, rather than the commonwealth by priests; in this lies the great contrast between the civilization of Egypt and that of Greece and Rome, or, to take an example from our own time, between the State religion of modern Rome and that of England.

6.—1. *Paul Laband. Die vermögensrechtlichen Klagen nach den sächsischen Rechtsquellen des Mittelalters.* Königsberg.

2. *Heusler. Die Beschränkung der Eigenthumsverfolgung bei Fahrrabe und ihr Motiv im deutschen Recht. (Festschrift zu Homeyer's fünfzigjährigem Doctorjubilaeum.)* Basel. 1871.

IN a recent number of this Review * an attempt was made to describe the earliest German legal procedure, as it has been explained by the labors of recent German jurists. One branch of this procedure concerns what is there called the vindication of personal property, and is, in the history of modern law, by no means the least interesting. The works above cited furnish the means of continuing the investigation down through the difficult and confused period of the Middle Ages, so far as concerns Germany; although in order to offer a complete evolution of the law in all the continental countries which felt the influence of Germanic institutions, it is necessary that the reader should pursue some further investigations into the old French and Norman sources. By doing so, one may easily embrace the entire development of an important branch of law both in Ger-

* See the North American Review for April, 1874. Thévenin. *Procédure de la Lex Salica: Traduction de l'Allemand de Rudolf Sohm.*

many and in France, anterior to the introduction of Roman jurisprudence. English students may judge for themselves whether or not this investigation throws light upon the character of their own law.

The fact that a chattel has passed from the possession of an individual against his will, gives rise to an action *in rem scripta* for the benefit of the party dispossessed. The principle which lies at the root of this action is thus formulated by Laband, according to the German and especially the Saxon sources of the Middle Ages : " No one can acquire any useful right to a chattel, as against the possessor of that chattel, when the possessor has been dispossessed against his will." This principle, which Laband has deduced with much legal subtlety from the original German sources, is also to be found in the richest mediaeval French and Norman authorities. It is therefore very interesting to compare the SachsenSpiegel, the Customs of Magdeburg, Freiberg, Goslar, etc., with the Assises of Jerusalem, the Conseil de Pierre de Fontaines, the Établissements de St. Louis, etc.

The principle thus stated indicates, 1. The legal ground of the plaintiff's claim ; 2. The nature of the defendant's defence ; 3. The mode of proof. Each of these three points is the object of an elaborate study in Laband's work. Before examining them, however, he describes the acts which must precede and introduce the action. In comparison with those earlier forms already alluded to in the procedure of the Lex Salica, it seems as though the law in its development lost what may be called its formal richness, to gain in abstraction. In the Saxon sources these preparatory acts are reduced to very little ; in the French, they have almost disappeared. According to the Assises de Jerusalem and the Établissements, the party who has been dispossessed follows his chattel and arrests it, that is to say, seizes it, in order to affirm in a tangible manner the identity of the chattel found with the chattel *desmané*. The parallelism of the German and French sources is made obvious by a comparison between this " following " of the chattel, and the *vestigium sequi* of the Lex Sal. et Rip., or again between the expressions " trouver sur un homme " and " super hominem invenire," and finally between the French *aréster* and the Saxon *anevangen*; *desmané* and *abhanden gekommen*. Once the chattel has been so *arresté*, the dispossessed party resumes possession of it, if the actual possessor does not gainsay it ; if he does, the issue is made. There is then a first extrajudicial summons before witnesses, to restore the chattel ; then a judicial summons. It is to be remarked that according to Laband, as also according to the old French customary law, the summons is to be made according to a certain fixed

formula, in connection with which it is well to compare Brunner's *Wort und Form im altfranzösischen Process*. The last words of the French form, "donc vous defent ge de par le seignor," mark the growth of the judicial authority; the private authority which was sufficient for the *Leges barbarorum* is here reduced to the second rank.

The dispossessed party can now only claim the assistance of the judge; that is, begin his action. Laband has admirably explained the character of the mediaeval German action: "Der Begriff der deutschen Klage ist die Anrufung der richterlichen Hülfe, dem Kläger das zu verschaffen worauf er anspruch erhebt." The same idea characterizes the action of the old French law. The plaintiff invokes the *assistance* of the judge: "et vos pri et requier que voz me faites dreit" (Ass. Jer.). The action has, however, no particular name; the sources simply state the concrete fact of dispossession, whether loss, theft, or otherwise.

We now come to the most delicate point of Laband's work, and one which we cannot but consider to have been particularly well treated. Many jurists, as is well known, have already gone into the study of possession, and of its legal effects both in ancient and modern law. A jurist of considerable repute, Bruns, has treated the subject of actions for the recovery of personal property, in his work, *Das Recht des Besitzes*, as a part of the Law of Possession. Writers on ancient French law have either neglected this subject of the "*vindication mobilière*," as it is termed, or have not sought for the foundation on which it rests. On this point too, Warnkönig, in his *Französische Rechtsgeschichte*, is either insufficient or inexact. Bruns, and with him most of the German legal historians, believes that the action for recovery of chattels is founded in the right of property, or at least in a right of detention derived from the proprietor. Laband completely upsets this theory, and shows that this action is founded solely on the fact of the *involuntary* loss. His demonstration in regard to German law is supported by applying to it the test of comparison with the old French Customs,—before any Roman influence came to affect profoundly the normal development of our institutions,—by which it will appear that the action in question rested there, too, on the fact of the involuntary loss, and on that alone. This matter is so curious and important, not merely as pure law, but as a part of the history of the right of property itself, that it is worth a moment's examination.

1. The plaintiff's enumeration of facts is double: (*a*) he had the chattel in his possession; (*b*) it went out of his possession against his will. These are the only relevant facts which are admitted to proof.

The proof, both according to the Saxon sources and the Assises de Jerusalem, separates itself into two elementary proofs ; the claimant swears that the object passed from his possession in consequence of a fact independent of his will (Laband, p. 109 ff.), and similarly in old French law the claimant swears that he has lost the object *outre son gré*. Further, the fact of the anterior possession is to be proved, according to the French sources, by two witnesses who have seen the claimant "saisi et tenant comme dou sien," that is to say, in *possession* of the object, while the Saxon sources differ in regard to the mode of administering this latter elementary proof. Thus, according to the Sachsen-Spiegel, the claimant must take oath to the two affirmations set forth, with two witnesses (Wissenszeugen) who have seen him in possession, while other sources exact only the oath of the claimant alone. In either case the principle laid down by Laband, and verified by the French Customs, holds good.

2. As to the means of which the defendant may avail himself for his defence, they are clearly indicated, and result from the principle above mentioned. It is a mistake to suppose, as some writers have done, that the defendant could make no good defence, — without being convicted of theft, — unless he averred that he was lawfully possessed of the article in question. This is again the same mistaken conception of the action for recovery of a chattel, according to which both claimant and defendant would be obliged to establish the existence of a right of property, or at least of some real right in the thing. This is the modern conception of the personal action, not at all the conception of mediaeval law. Without following Laband into his examination of the particular cases, and without detailing the means of defence which may be successfully employed by the defendant, it is enough to add to what has been already said, that the defendant has the alternative of proving either ; (a) that the claimant has not been dispossessed of the article in dispute ; or (b) that, if dispossessed, it was with his own free will and consent. Thus it appears that, neither by the old German law nor by the French Coutumes, was the defendant held responsible, if he could establish that the claimant had made a voluntary transfer (*avec son congé*, in the French) of the article in question. Another good defence is where the defendant can prove that he received the object from his adversary himself by sale, gift, etc., or, again, where he can prove that he himself fabricated the object or bred the animal in litigation. But it is to be observed that the defendant does not pretend a right of original property based on the fact of production. The fact of production, when established, results in absolutely overthrowing the allegation of

the claimant, "I lost possession against my will," but does not raise the question of property. Both in the defence and in the claim the parallelism is complete between the German sources and the old French Customs, at least in those points which are treated by each, although the former are much the more complete in their treatment. Reciprocally there can be found in neither any example of a plea in defence which tends to the direct establishment of a right of property or even of any real right whatever for the benefit of the defendant.

In order properly to understand the system on which the oath is administered, and the principle on which the defence rests, according to Laband's theory, which seems alone to conform with the authorities, it is indispensable that the student should be thoroughly familiar with the principle on which the claim is supported, and which has been briefly indicated above. To sum it up in a precise form: the claim (the *aveu* of the French *coutumiers*) is the putting in action, for the benefit of the claimant, of a right derived from the fact of involuntary dispossession; not, as in the Roman law, the putting in action of a right of property, or more generally of a real right, in consequence of which the claimant ought to possess the chattel. With this clew it is easy to disentangle the principle which is to serve as the defendant's guiding rule. It may be stated thus: The defendant is allowed to offer every defence or exception which tends to prove: 1st. That the claimant has not been dispossessed of the articles in question; or, 2d. That if dispossessed, he has been voluntarily dispossessed: and since these forms of defence are the only ones which destroy the adversary's allegations, it is to be added that he can offer these and no others. On this ground of the defence it is also very interesting to compare the ancient French *coutumes* with the Sachsen-Spiegel and the Saxon customary law in general. Like the German writers, the French authors who have handled this subject, Warnkönig, Ortlieb, etc., have missed the theory of the defence. Warnkönig, for instance, says (II. 336): "Der Beklagte kann sich als dann wofern er nicht als Dieb dastehen soll, nur dadurch vertheidigen dass er behauptet auf rechtmässige Weise in den Besitz jener Sache gekommen zu sein." This is the Roman conception. So Ortlieb, (p. 88): The defendant "pouvait prétendre qu'il avait légitimement acquis la chose," has fallen into the same error. Laband has not insisted strongly enough on the defence. There are points in the Saxon authorities on which he has not laid weight enough. He has done well to arrange in two distinct groups the forms of defence that the defendant may offer: (a) those defences which, presented and conducted in the prescribed forms, aim to overthrow the claim funda-

mentally; which are the only defences proper; and (b) those which, while leaving the action itself untouched, aim to free the defendant from the charge or even the suspicion of theft.

3. As for the proof, it is administered according to the general principle laid down in the foregoing pages. The right to bring proof belongs to the claimant, who has demanded the aid of the judge. Sometimes he proves by his single oath, sometimes assisted by two witnesses, according to the nature of the case and the custom of the country. If the defendant sets up a good defence, he proves in his turn, either alone or with witnesses. In both cases the right to prove is given by judgment. This follows the old Germanic principle. Laband does not, however, enter into any discussion of the character of proof as shown by the sources of German law,—a discussion which would be out of place in a doctrinal essay on actions,—but contents himself with using the results obtained on this point by the previous investigations of von Bar, Planck, etc., which he applies to each particular case examined.

Under the title of *Die Beschränkung*, etc., Professor Heusler examines the interesting case of revindication of chattels which is found in the Sachenspiegel, II. 60, § 1, and which may be reduced to the following formula: The person who allowed another to hold his chattel could not recover it as against a third party, whether the chattel had come into possession of this third party by virtue of a form of law, by delivery, by forfeit, by embezzlement, or by theft. Heusler's work completes that of Laband in so far as it investigates the reason of the rule of law above given. This rule is nothing else than the German legal doctrine, "Hand muss Hand wahren," presented in a concrete form. The author traces to the Salic Law the origin of the restriction so imposed, and develops the idea that according to that law there was no civil procedure except in the case of *fides facta* and *res prestita*. The judicial pursuit of chattels which have passed out of possession (*desmanés*) was unknown; the Interration procedure has already lost the character of a purely executive procedure, and belongs henceforward to a period of subsequent law. If this be admitted, it must have been originally impossible to pursue a chattel wrongfully taken away or detained, unless by covering up the claim in the form of the pursuit *ex delicto*. But this criminal action did not belong to the proprietor, but to the party who had the article in trust. This is certainly an idea which deserves attention, especially when connected with Sohm's theory on Salic procedure. Nevertheless, it can hardly be said that the passages *De vestigio minando* and *De filtortis* of the Salic Law have yet received a complete

explanation. For illustration here, too, it is interesting to compare Ssp. II. 60, § 1, with Beaumanoir, Coutumes de Beauvoisis, 38, 2, and 31, 16 : "Se une coze est louee a aucun et ele est emblee, le porsuite en apartient a celi qui le loua, car il est tenus au rendre le coze qui li fu louee." If a thing is let out to any one and is stolen, the pursuit of the thing belongs to the one who hired it, for (and this indicates the legal motive) he is obliged to return the thing which was let out to him. After what has been said above, there is no occasion to enter in detail into the results offered by this work, which are not essentially different from those of Laband.

Hereafter it may be of use to the more abstruse students of law, as approached from the historical side, to examine into the nature of real actions in the old German and especially Saxon sources, and to connect with these a comparison with the oldest French authorities. On this subject also the works above mentioned, as well as others of the existing German school, throw much light.

M. T.

7. — *A Short History of the English People.* By J. R. GREEN, M. A., Examiner in the School of Modern History, Oxford. With Maps and Tables. London : Macmillan & Co. 1875.

IT is difficult to speak of this book in any other terms than those of unqualified praise. Its learning, its style, its imagination, and, almost above all, its sound common-sense, are most remarkable. Readers of this Review will readily acquit its criticisms of any tendency towards indiscriminate laudation, and may therefore be less disposed to scepticism if the critic for once frankly begins by asserting that Mr. Green cannot be ranked among contemporary English historians second to any one but Macaulay himself.

Never has the popular style of historical writing been raised to so high a standard as in Mr. Green's work. He has hit a curiously happy vein of picturesque, yet unaffected narration. As an example, one among hundreds, here is a description of the mental state of England at the time of Wat Tyler's rebellion, about the year 1380 :—

"The cry of the poor found a terrible utterance in the words of 'a mad priest of Kent,' as the courtly Frois-art calls him, who had for twenty years been preaching a Lollardry of coarser and more popular type than that of Wyclif, and who found audience for his sermons, in defiance of interdict and imprisonment, in the stout yeomen who gathered in the Kentish churchyards. 'Mad,' as the land-owners called him, it was in the preaching of John Ball that England first listened to the knell of feudalism and the declaration of the rights of man. 'Good people,' cried the preacher, 'things will never go

well in England so long as goods be not in common, and so long as there be villains and gentlemen. By what right are they whom we call lords greater folk than we? On what grounds have they deserved it? Why do they hold us in serfage? If they all came of the same father and mother, of Adam and Eve, how can they say or prove that they are better than we, if it be not that they make us gain for them by our toil what they spend in their pride? They are clothed in velvet, and warm in their furs and their ermines, while we are covered with rags. They have wine and spices and fair bread; and we oat-cake and straw, and water to drink. They have leisure and fine houses; we have pain and labor, the rain and wind in the fields. And yet it is of us and of our toil that these men hold their estate.' It was the tyranny of property that then as ever roused the defiance of socialism. A spirit fatal to the whole system of the Middle Ages breathed in the popular rhyme which condensed the levelling doctrine of John Ball, 'When Adam delved and Eve span, who was then the gentleman ?'

"The rhyme was running from lip to lip when a fresh instance of public oppression fanned the smouldering discontent into a flame. . . . Quaint rhymes passed through the country, and served as summons to the revolt, which soon extended from the eastern and midland counties over all England south of the Thames. 'John Ball,' ran one, 'greeteth you all, and doth for to understand he hath rung your bell. Now right and might, will and skill, God speed every dele.' 'Help truth,' ran another, 'and truth shall help you! Now reigneth pride in price, and covetise is counted wise, and lechery withouten shame, and gluttony withouten blame. Envy reigneth with treason, and sloth is take in great season. God do bote, for now is tyme !' We recognize Ball's hand in the yet more stirring missives of 'Jack the Miller' and 'Jack the Carter.' 'Jack Miller asketh help to turn his mill aright. He hath grounden small, small: the King's Son of Heaven he shall pay for all. Look thy mill go aright with the four sailes, and the post stand with steadfastness. With right and with might, with skill and with will; let might help right, and skill go before will, and right before might, so goeth our mill aright.' 'Jack Carter,' ran the companion missive, 'prays you all that ye make a good end of that ye have begun, and do well, and aye better and better: for at the even men heareth the day.' 'Falsehood and guile,' sang Jack Trewman, 'have reigned too long, and truth hath been set under a lock, and falseness and guile reigneth in every stock. No man may come truth to, but if he sing "si dedero." True love is away that was so good, and clerks for wealth work them woe. God do bote, for now is time.' In the rude jingle of these lines began for England the literature of political controversy; they are the first predecessors of the pamphlets of Milton and of Burke. Rough as they are, they express clearly enough the mingled passions which met in the revolt of the peasants; their longing for a right rule, for plain and simple justice; their scorn of the immorality of the nobles, and the infamy of the court; their resentment at the perversion of the law to the cause of oppression."

If this extract is an example of the skilful weaving of picturesque

details into the web of history, the following is an example of constitutional theory of the best kind. Perhaps, however, this Review is no fair judge of the merit of Mr. Green's idea, which is one that supports opinions as to the origin of Parliament which have been heretofore pressed with some earnestness in these pages :—

" Amidst the many judicial reforms of Henry or Edward the Shire Court remained unchanged. The haunted mound or the immemorial oak round which the assembly gathered, were the reliques of a time before the free kingdom had shrunk into a shire, and its Meetings of the Wise into a county court. But save that the King's Reeve had taken the place of the king, and that the Norman legislation had displaced the bishop and set four coroners by the sheriff's side, the gathering of the freeholders remained much as of old. The local knighthood, the yeomanry, the husbandmen of the county, were all represented in the crowd that gathered round the sheriff, as, guarded by his liveried followers, he published the king's writs, announced his demand of aids, received the presentment of criminals and the inquests of the local jurors, assessed the taxation of each district, or listened solemnly to appeals for justice, civil and criminal, from all who held themselves oppressed in the lesser courts of the hundred or the soke. It was in the county court alone that the sheriff could legally summon the lesser baronage to attend the Great Council, and it was in the actual constitution of this assembly that the crown found a solution of the difficulty which we have already stated. For the principle of representation by which it was finally solved was coeval with the shire court itself. In all cases of civil or criminal justice the twelve sworn assessors of the sheriff represented the judicial opinion of the country at large. From every hundred came groups of twelve sworn deputies, the 'jurors' through whom the presentments of the district were made to the royal officer, and with whom the assessment of its share in the general taxation was arranged. The husbandmen on the outskirts of the crowd, clad in the brown smock-frock which still lingers in the garb of our carters and ploughmen, were broken up into little knots of five, a reeve, and four assistants, who formed the representatives of the rural townships. If, in fact, we regard the shire courts as lineally the descendants of our earliest English Parliaments, we may justly claim the principle of Parliamentary representation as among the oldest of our institutions. . . . The court was composed of the whole body of freeholders, and no sheriff could distinguish the 'aye, aye' of the yeoman from the 'aye, aye' of the squire. From the first moment, therefore, of their attendance, we find the knights regarded, not as mere representatives of the baronage, but knights of the shire, and by this silent revolution the whole body of the rural freeholders were admitted to a share in the government of the realm."

The one great constitutional machine which characterized all Teutonic society in its earliest historic phase was, therefore, the Hundred or shire court, from which was developed all the public and private law of the Anglo-Saxon time, army, king, witan, and the whole ad-

ministration of justice, even to the point of absorbing much church law ; and this same primeval institution, surviving the shock of conquest, civil war, and social decay, even after the steady drain of centuries which carried its powers one by one into other hands, still retained force enough in the thirteenth century to become the foundation of Parliament. This historical principle is on the whole the most valuable of all those which modern investigation has discovered, since it stamps the whole theory of monarchy as understood in the high-prerogative period, as a mere historical blunder, and establishes beyond further question the historical truth of the principle that, at least in the Teutonic race, the people always have been the rightful source of political power.

The interest of Mr. Green's work culminates, however, in the period of the Renaissance, which he has seen proper to call the "Renascence." There is something petty and captious in finding fault with the words or the spelling an author chooses to employ, and the critic who does this by choice can have little else to say. But human patience has its limits. Alfred the Great could and did sign himself "Alfredus"; the English language has for ages known only this form of the word; but we are now obliged to call him by the pedantic form of Alefred, and Mr. Green joins with our persecutors. To this the reading public must perforce submit, because, like other antiquarian pedantry, the reform has a good side. But why should Englishmen insist on anglicizing foreign names and words; and if this must absolutely be done, cannot Mr. Green obtain some result less absurd than *Lewis Doutremer*, for instance, and less — nasty, shall we say, — than *Renascence*? Is there one living Englishman who thinks so ugly a Latinism as *Renascence* better English than so well-established a Galicism as *Renaissance*? Not that the translation is a thing in itself objectionable, least of all in a popular work; but if anything so thoroughly understood is to be translated, at least the translation should be better and more intelligible English than the original.

At all events the period of the "New Monarchy" and the "New Learning" is that on which the interest of Mr. Green's history touches its highest point. The reigns of Henry the Eighth and Elizabeth are admirably told. To make extracts here is not easy, for the chapters are made to be read as a whole, not in fragments, but any one who wishes to form a judgment of this part of the work can turn to the delineation of Elizabeth as on the whole a very fair specimen of Mr. Green's quality as a writer and a critic.

Excellent as the political part of the work is, its excellence is

almost thrown into the shade by the literary part. All ages have agreed in considering the public acts of men and states as forming the ground-work of history. Upon this foundation moderns have built two upper stories, so to speak ; they have made it almost essential that every history nowadays should contain an account of the modes of life, and another of the modes of thought, which characterized the period described. Mr. Green has entirely omitted the first of these two duties. He has attempted no description of the changes in habits and manners. On the other hand, he has thrown his whole energy into the other and the far more important subject of the development of modern thought. His accounts of Chaucer, of Wyclif, of More, of Shakespeare, form as delightful reading as it has been men's lot to meet in these recent years. A page in regard to the close of the Elizabethan age is worth quoting, not because it is very much better than the rest, but because it contains the gist of this whole portion of the history :—

"The 'obstinate questionings of invisible things' which had given their philosophical cast to the wonderful group of dramas which had at last raised Shakespeare to his post among the greatest of the world's poets, still hung round him in the years of quiet retirement which preceded his death. . . . His last dramas, 'Othello,' the 'Tempest,' 'Cæsar,' 'Antony,' 'Coriolanus,' were written in the midst of ease and competence, in the home where he lived as a country gentleman with his wife and daughters. His classical plays were the last assertion of an age which was passing away. The spirit of the Renascence was fading before the spirit of the Reformation. Puritanism was hardening and narrowing, while it was invigorating and ennobling life by its stern morality, its seriousness, its conviction of the omnipotence of God and of the weakness of man. The old daring which had turned England into a people of 'adventurers,' the sense of inexhaustible resources in the very nature of man, the buoyant freshness of youth, the intoxicating sense of beauty and joy, which had created Drake and Sidney and Marlowe, were dying with Shakespeare himself. The Bible was superseding Plutarch. The pedantry of Euphuism was giving way to the pedantry of scriptural phrases. The 'obstinate questionings of invisible things,' which haunted the finer minds of the Renascence, were being stereotyped into the theological formulas of the Predestinarian. A new political world, healthier, more fully national, but less picturesque, less wrapt in the mystery and splendor which poets love, was rising with the new moral world. Rifts, which were still little, were widening hour by hour, and threatening ruin to the great fabric of church and state, which Elizabeth had built up, and to which the men of the Renascence clung passionately. From all this new world of feeling and action Shakespeare stood utterly aloof. Of the popular tendencies of Puritanism—and great as were its faults, Puritanism may fairly claim to be the first political system which recognized the grandeur of the people as a whole—Shakespeare knew nothing. In his earlier dramas he had reflected the common

faith of his age in the grandeur of kingship as the one national centre; in his later plays he represents the aristocratic view of social life which was shared by all the nobler spirits of the Elizabethan time. Coriolanus is the embodiment of a great noble; and the reiterated taunts which he hurls in play after play at the rabble only echo the general temper of the Renaissance. Nor were the spiritual sympathies of the poet those of the coming time. While the world was turning more and more to the speculations of theology, man and man's nature remained to the last the one inexhaustible subject of interest with Shakespeare, as it had been with his favorite Montaigne. Caliban was his latest creation. It is impossible to discover whether his faith, if faith there were, was Catholic or Protestant. It is difficult, indeed, to say whether he had any religious belief or not. The religious phrases which are thinly scattered over his works are little more than expressions of a distant and imaginative reverence. And on the deeper grounds of religious faith his silence is significant. He is silent, and the doubt of Hamlet deepens his silence, about the after world. 'To die,' it may be, was to him as to Claudio, 'to go we know not where.' Often, at any rate, as his 'questionings' turn to the riddle of life and death, he leaves it a riddle to the last, without heeding the common theological solutions around him: 'We are such stuff as dreams are made of, and our little life is rounded by a sleep.'"

As Mr. Green advances into the eighteenth century, there are symptoms of declining interest, of haste, perhaps, of natural fatigue. It is true that the "Augustan Age" is no longer in fashion. Dryden and Pope, Addison and Gray, are comparatively little read; but they are history for all that, and Mr. Palgrave's remark is worth remembering, that "an intelligent reader will find the influence of Newton as markedly in the poems of Pope, as of Elizabeth in the plays of Shakespeare." Fielding and Smollett, and the creation of the modern novel, are ignored like Pope, Gray, and Horace Walpole. The name of Burns is not to be found in Mr. Green's book, which contains no mention of the great revival he represented, which found its prophet in Wordsworth. Of Hume and Gibbon, of Samuel Johnson, of the philosophy and the mental struggles of the eighteenth century, Mr. Green says not a word. Even the political narrative of this period becomes labored. The mind at last refuses to assimilate this condensed essence of history, and one's last sensation is one of fatigue.

This is not altogether Mr. Green's fault. Any single mind has its limits, and even in the greatest human intelligence those limits are really not hard to reach, though its range of knowledge may seem infinite. A history of England must inevitably overstrain the powers of any mind, even the most capacious that has ever yet o'erinformed its tenement of clay. The field is too large. Great as is Mr. Green's ability and wide as is his learning, he cannot carry his own individuality thoroughly into every part of it. He cannot be equally sure o-

his judgment in every portion of the work. His mind must yield to human weariness. He cannot always be accurate even in his facts. It is true that, in the broad sense of absolute accuracy, there never was, and there never will be, a history written, so long as man is neither omniscient nor omnipresent, which can be more than approximately exact. Absolute truth in history is a thing which cannot be, at least so long as to err is human. But the more the historian's task is limited, the better is his chance of mastering every detail ; in a compendious history of England, absolute mastery of detail is simply impossible. Probably no educated American has read Mr. Green's history without feeling that the American chapters, though admirably done, show only superficial study. The only American book referred to is Mr. Bancroft's History, even in regard to the colonization of New England. Dr. Palfrey is apparently unknown in British libraries ; and that most delightful of all pictures of the Puritan, the "Life and Letters of Governor Winthrop," by Robert C. Winthrop, has never made its way to London. The ideal Puritan statesman, John Winthrop, is converted into a minister. Nine readers out of ten would understand Mr. Green to say that the crown granted a charter to Massachusetts, including Plymouth, and so created one Puritan colony, of which Boston was the capital. So, in the time of the American Revolution, an American would hardly have said that Washington gained his experience of war in Braddock's expedition, seeing that it was his experience in war that recommended him to Braddock. Nor would a Virginian have been apt to attribute so absolute an influence to Washington in 1770 over Virginia, as Mr. Green indicates. Virginia had at that time many great men, whose local influence was equal or superior to that of Washington. Nor would Americans generally concede that "even America hardly recognized Washington's real grandeur" till after his death. Americans, too, would hardly consider that Mr. Green understood or appreciated one of Washington's most brilliant military exploits, as described in the words, "The spring of 1776 saw them (the British army) withdrawn from Boston to New York." It was rather Montgomery's campaign than Arnold's raid that "nearly drove the British troops from Canada." Spain did not make an "alliance" with the States. These are mere matters of detail, and, in the great current of English history, American affairs are themselves a mere detail and may fill eight pages out of eight hundred. Nor is it intended to suggest that Mr. Green's book is inaccurate. On the contrary, it is probably as accurate as such a work can be. But if the American, who is a specialist in regard to the American portion of the book, detects in an instant

that Mr. Green is not a specialist there, the probability is strong that specialists elsewhere will reach the same conclusion in their own peculiar fields.

In short, the difficulties inherent in the task of writing a compendious history of England are such as to defy complete success, and to make it almost a matter of regret that the highest order of mind should attempt it. There is another reason for regret, which is still more to the point. The time has not yet come when English history is well enough known to allow of its being written as a whole. Every year new light is thrown upon it, and the text-books of one decade are antiquated in the next. Even in regard to the last three hundred years, the most thoroughly known period of English history, new information is incessantly modifying the views of historians. Yet the writer who undertakes to deal with this period has one immense advantage. Since the fifteenth century the conditions of life have been tolerably uniform, so that any one now living may be supposed capable of entering without great effort into the thought, language, and manners of these centuries. But the life of England from the fifth century to the fifteenth is almost purely an antiquarian study. The original conditions of it are as yet not thoroughly certain. In spite of the labors of Sir Francis Palgrave, Mr. Freeman, and Professor Stubbs, early English history has by no means said its last word, and the harvest is still rich to the gleaner. And if this is the case with Saxon England, which has been so thoroughly and carefully worked over by men of such high abilities, what can be said of Norman and Angevin England? what of Lancastrian and Yorkist England? There are long gaps of frightful ignorance, wide chasms that have never been sounded, across which Mr. Green leaps as he best can. For a long time yet the antiquarian must here be of more value than the generalizing historian; the editor must precede the narrator; the microscope will be a more valuable instrument than the field-glass. Sheer antiquarian drudgery of the least attractive kind can alone bring those ages to life, restore their modes of thought, their manners, and the logical sequence of their steps.

The more highly, therefore, the critic appreciates the ability, the genius that has so suddenly raised Mr. Green to the highest rank of English historians, the more keen must be the regret that so charming a work must soon cease to be abreast of the knowledge of the time. Yet there is one consolation which will weigh against this drawback. The advance of historical knowledge and the steady application of sound historical method may diminish the authority and value of Mr. Green's work as a mere statement of fact or theory, but

nothing can ever take away its calmness of judgment, its elevation of tone, or its beauty of style.

8.—*Fears for Democracy regarded from the American Point of View.*

By CHARLES INGERSOLL. Philadelphia: J. B. Lippincott & Co.
1875.

THE author says in his Preface that "these pages have been much curtailed from what were prepared for the press." This shows good sense, good taste, and good judgment. He could have done but one better thing ; he might have suppressed them all.

To review a book of this kind properly some attempt should be made to state the theory on which it is based, and then explain the arguments used to support it ; but when there does not appear to be a theory, and the argument reduces itself pretty much to general abuse, the reviewer is rather at sea. The only impression left on the mind, after reading the "Fears for Democracy," is a vague notion that the author thinks the American people would do better if they attended more to politics, and that centralization endangers the Republic. This is good so far as it goes, but three hundred pages of solid print seem rather a large allowance for the statement of truths which have begun to grow a little stale after forty years of constant repetition. As for the argument, it would be hard to find any one beside Washington of whom good is said, except that, oddly enough, a strange kind of affection is shown for both of those most irreconcilable of characters,— Hamilton and Jefferson.

Under such adverse circumstances but one course remains, and that is to give the reader some idea of the author and then let him speak for himself. Mr. Ingersoll appears to be a person of considerable desultory reading, and of slender discrimination. He is beset with a passion for quotation ; he quotes recklessly, without seeming to care much from whom, so long as he quotes. Some sections are an absolute mash of different authors. His politics probably were originally Whiggish, after the Webster-Clay type ; in course of time he drifted into Democracy, and became copperhead during the war : just now he has a very Bourbon smack. The first hundred pages are harmless, and are taken up with telling us in different ways that the Federalists wanted strong government and the Republicans did not ; that finally the Republicans elected Mr. Jefferson, and that then America grew more democratic. All which we have heard at least once before. As he comes to the war, however, Mr. Ingersoll snuffs the battle from

far, and begins to snort and lash his tail. When excited he is to be feared. Nouns and verbs had best take shelter at such times, for when thoroughly roused he is capable of treating them like this : "When we look back to acknowledge it was, in the race for executive patronage and on pretences disavowed, when the danger arose, by all but those who never flinched, that small men and small ambitions brought a people so flourishing and happy as we were to seeming ruin." In speaking of the slavery agitation he remarks : "The debate began the 11th of January, 1836. Mr. Buchanan presented to the Senate, and gave rise to it, the Memorial of the Caen Quarterly Meeting," etc. And such sentences occur on every page ! The merciful man is merciful to his beast, but Mr. Ingersoll has no mercy on his mother-tongue.

Mr. Ingersoll traces most of the nation's ills to the combined wickedness of the Abolitionists and the office-seekers ; on the whole he hates the Abolitionists a thought the most, but they are pretty tough customers, and have stood so much pounding in old days, that at this late date there seems little chance of doing much in that direction. The office-holders, however, are a different question, and all decent folks are agreed that something ought to be done to keep them in order. Mr. Ingersoll does not propose any reform, but he states a fact which, if true, is calculated to cause real uneasiness ; he says, "The office-seekers were not ashamed to measure their conduct to what they deemed the smallest hazard to their places." This is very bad, and one is inclined to think all the worse of them from the mysteriousness of the offence. They have long been known to be a corrupt and greedy class of people, but when they commit the sin of "measuring to," the honest citizen feels his gorge fast rising.

For a long time before the war the South had perhaps more to complain of than we, at the North, are now willing to allow ; but certainly the Southerners themselves had no idea of how very badly they were treated, for the "war ended a long persecution, in malignity not exceeded by any religious persecution, and this persecution was unrelentingly pursued" in a deep feeling of wickedness and hate. If this be true of the conduct of the North before the war, it would puzzle Mr. Ingersoll, even with his incomparable power of involution, to express, by massing together the combined invectives of all the languages in the world, the atrocity of its conduct since. This is really too bad, as the South has suffered enough of late years not to have its case made ridiculous before Northerners and before the world. During all the long period before the war there was little in the free States in the way of ability, for "since the death of Mr. Hamilton,

the North had not produced one acknowledged leader : they all came from slave-holding States." This statement is open to some doubt, to judge from the language used by slaveholders at the time.

Even at the risk of being dull, and with a pervading sense of the gravity of the crime, room must be made for this sketch of the Presidential conventions in 1860. And though no convention pretends to be a very noble assembly, those held in that year seem to have been below the average. The people then sent "hungry delegates to miserable conventions, to inaugurate a revolution, with every thinking man in the whole country against it." No wonder, as Mr. Ingersoll observes, "the veterans of a revolution crowned with success and honor, and led by heroes, . . . would have trembled" could they have been told of such a destiny. So far it is all plain sailing, but exactly what Mr. Jefferson's Louisiana purchase has to do with these "hungry delegates" and "trembling heroes" is not so clear. That there must be some connection between them is certain, for they are all mixed up together in one paragraph. At the same time we are asked, "where would be our destiny if the English had become our neighbors along the whole line of our western frontier?" This is a hard question, but if one dared to hazard a guess, it might be suggested that the abode which suits it now with the British all along our northern frontier might suit it indifferently well under the proposed change.

Men under the influence of political passion are apt to disparage their opponents ; very few of us however are so jaundiced as not to be able to find any one whom we can respect. A Southerner probably would think lightly enough of the abilities of Lincoln and Seward, of Sumner, of Andrew, and of Chase ; a Free-Soiler might despise Davis, Douglas, or Breckenridge, while both might sneer at Everett and the Whigs, but there are not many who could honestly say, "we know . . . that in the Revolution of 1776, a country of some three millions of people produced illustrious men ; and in that of 1860, the same country, ten times as populous, did not produce one. No merit appeared that was not military." Whether or not Mr. Lincoln was a great man is hardly worth disputing. He is dead, and another generation will be the final judge of his statesmanship and of his wisdom. He would be the last man to claim a higher place than he deserved, and Americans might well be content to let his ashes rest in peace ; neither our praise nor blame can hurt him. Literature and eloquence nevertheless are judged by fixed rules, and to say of the man who dedicated the Gettysburg Cemetery "that he was of the order of men who fill places in their native village" reflects but little credit on the intelligence of the writer.

But it was not the South alone which was oppressed, the whole American people experienced (and for anything that we know still experience) wrongs of an intolerable kind. They cry aloud and no one hears them ; they are despised, insulted, — no one but Mr. Ingersoll knows how deeply. "The people had no influence." "The cry had been of the North" (whatever that may mean), "the vain cry of the unnoticed people, for years, that the South would be driven to revolution." "The people had come to be nothing but a despised crowd." After all this, who can doubt but that it is the solemn duty of Mr. Ingersoll to put the red cap of liberty upon his head, throw out his broad banner to the wind, and lead us to liberty or death ?

No one can deny that in the short history of this country there is much to regret, and more which it would be pleasant to forget ; but the average American has been apt to think that, whatever else has gone wrong, our foreign relations have usually been pretty well administered. Especially in regard to England, with the exception of some twelve years at the beginning of the century, an ordinary citizen might have been excused a feeling of pride at our diplomatic record. Yet Mr. Ingersoll says : "We have made numerous treaties in adjustment of controversies with Great Britain, and for the most part have had reason on our side, and the best of the argument, as the weaker party commonly has, but every case went against us until 1871, when the Alabama case, the most doubtful we ever debated, was determined in our favor." Lord Palmerston said in the House of Commons in the debate on the Ashburton Treaty : "There is nobody, I believe, who thinks it a good treaty, nobody who does not think it a bad and very disadvantageous bargain for England." Here is one case out of a good many where the opinion of some Englishmen, at least, seems to conflict with that of our author. Yet on second thoughts the opinion of Englishmen cannot be worth much, for they are shown to be a very bad and disreputable people indeed. "It was a point not disputed in the British debates on the reforms of 1831–32, *debates which might stand in honorable memory of that country were its other records blotted out*, that institutions are not to be made." Even to one not in the least an Anglo-maniac, this sounds rather severe. Think of it, the only honorable deed in eight hundred long years is the debate on the Reform Bill of 1832 ! Besides, would not the history read somewhat oddly if absolutely confined to those volumes of Hansard ? At first blush the story of the British empire might appear to lack connection were these speeches, fine as they are, taken quite alone. But no doubt this is an error of ignorance. Now why could not Mr. Ingersoll be pre-

vailed on to put his hand to the task, and, in his own clear, nervous sentences, dash us off a compendious little history of Great Britain compiled on this principle? Such a work could not fail to supplant those of all other writers from Bede to Macaulay. There is danger though of going too fast even in a matter so simple as this, and on Mr. Ingersoll's own showing his field must be enlarged. Men swayed by the passions of civil war never judge calmly, and the conduct of her Majesty's government during the Rebellion stirred up a bitterness at the North which the Treaty of Washington has even now only partially allayed; after reading the "Fears for Democracy," all must admit that this was wrong. The case is stated shortly and powerfully in these words: "Our astonishment knew no bounds when, in the civil war, the feelings of almost all the world were found to be with the slave-holders; but the great pulse of mankind beats generously, and against the wronger." Surely here is another honorable deed to be included in Mr. Ingersoll's new history. Then, too, there are the wrongs of the American people which were mentioned just now,—one history will never be enough! Or why could not we have the American wrongs as the body of the volume, with a commentary on English history in a neat appendix? Thus a new gospel or a kind of American Koran might be made of a handy size, and Mr. Ingersoll, like a modern Mahomet, might take the field with his sword in his hand and his book under his arm, slay our oppressors, and teach us history on new principles. Were Mr. Ingersoll to do this, the Republic might yet be saved, otherwise hope is wellnigh dead; for Mr. Ingersoll has already shown us that the oppression the South suffered before the war drove it to rebellion; he has also shown us that such oppression was by no means confined to the South, but that, on the contrary, the whole people were a despised crowd whose cry no one heeded, and he has more than hinted that this dreadful state of things continues. Unless, therefore, some deliverer arise, this is what we are to expect: "If we remain a free people, the same spirit that prompted the South to what they called secession will prompt the North, or the West, or the Middle, or any region where insult aggrieves or oppression tramples, to seek redress, and another conflict like that of 1860 will ensue." Before such a destiny not only the "victory-crowned heroes" of the Revolution, but we ourselves need not be ashamed to tremble.

9.—*Lucrezia Borgia. Nach Wekunden und Correspondenzen ihrer eigenen Zeit.* Von FERDINAND GREGOROVIUS. Stuttgart : Verlag der J. G. Cotta'schen Buchhandlung. 1874. 2 vols. 8vo. pp. xvi, 329, 140. Portrait and Fac-similes.

No one of the figures of modern history has assumed so legendary a character as that of Lucrezia Borgia. Scarcely anything is known even now about the questionable portion of her career, her early life ; and her infamy is based upon the assertions of an historian and two poets who did not live in Rome, and who had, moreover, political reasons for hating her family. The undoubted crimes of her father and brother were reflected upon her, and even their natural affection was construed into evidence of the most revolting immorality. When once public opinion had branded her as guilty of certain offences, it did not leave her until she had been made the modern type of female wickedness, and her portrait hung as a pendant beside that of her prototype, the notorious Messalina. The Reformation was no favorable time for attempting a rehabilitation of any member of the Borgia family ; all know the fate of Machiavelli's *Principe*, which praised Caesar for certain qualities which it would have been well had other Italians shared. Lucrezia's infamy then remained tacitly accepted, if not increased, until she fell into the hands of the Romantic school, and, hardest part of her posthumous fate, became the heroine of Hugo's play and Donizetti's opera.

It only required the most superficial investigation to see on how slight an historical foundation the fabric of Lucrezia's guilt had been built, and it is strange that its overthrow had not been earlier attempted by some of her own countrymen. It was, however, not until 1805 that Roscoe in an appendix to the "Life of Leo X.," attempted a refutation of some of the most shameful slanders directed against Lucrezia. This defence was wanting in documentary evidence and thorough research, and was regarded as a sentimental and chivalrous attempt to defend a woman who had failed to find a champion among her own countrymen. It was easy to show that if Guicciardini, Pontanus, and Sannazaro, who had not known her, and who, as we have hinted, had political reasons for hating the Borgias, had slandered her, Ariosto, Aldus Manutius, Bembo, and a host of others who had known her intimately had showered upon her splendid eulogies. This argument is not very strong. Mankind are

prone to take more interest in vice than virtue, and will be slow to accept a guiltless Lucrezia Borgia.

The question agitated by Roscoe was taken up in Italy, where a number of articles on the subject appeared in the various periodicals and separately. A complete biography was not published until 1869, and was the work of an Englishman, William Gilbert,* who used to advantage the materials accumulated by his predecessors in this field, but whose own superficiality and lack of method seriously impair the value of his work. This was the state of the discussion when there appeared, in 1870, the volume of Gregorovius, *Geschichte der Stadt Rom im Mittelalter*, which contained the period of Alexander VI.

The author had collected from the various archives of Italy a mass of precious materials which he could only partly employ in his great work. He determined to devote the rest to a monograph on the subject of Caesar or Lucrezia Borgia. He decided in favor of the latter on account of his discovery in 1872, in the notarial archives of the Capitol at Rome, of a large number of important documents relating principally to Lucrezia, among them all her marriage contracts and other legal acts, throwing much light upon the family relations of the Borgias.

The result of his discoveries Gregorovius has given to the world in the work before us, the most complete and valuable contribution to the discussion, and, a few faults excepted, an almost perfect historical monograph. These faults are to be found in all of the author's previous works, and are briefly : unskilful use of his materials, prolixity, and an ardent imagination which leads him to supply from his own brain the gaps in his authorities. He is tireless in his researches, and has examined for the work before us not only the Roman archives, but those of Modena, Mantua, and elsewhere. Lengthy extracts from the documents found in these places are given in the text, and most of them are then printed *in extenso* in the Appendix,—a proceeding that increases the size and not the value of the work. In his desire to present a vivid picture of the events he is narrating, he loads his pages with useless details of ceremonies, giving at tiresome length the names and rank of unimportant persons. This minute narration at times seriously injures the unity of the work ; for instance, when Lucrezia marries Giovanni Sforza, Lord of Pesaro, there follows a history

* *Lucrezia Borgia, Duchess of Ferrara. A Biography.* By William Gilbert. London. 1869. 2 vols. 8vo.

of that petty state and a detailed description of the town. When Lucrezia goes to Nepi to mourn her second husband, Alfonso of Aragon, we have an account of Nepi, its scenery, and history of the castle, even to the inscriptions over the various portals. A more excusable digression is when, after Lucrezia's marriage to the Crown-Prince of Ferrara, the history of that state and city is given at length. These digressions, although impairing the unity of the work, are in themselves valuable and interesting, and might, like the extracts from documents, have been put into the form of notes, and thus relieved the text of much irrelevant matter.

Gregorovius's style is picturesque and attractive, and he never fails to give his readers a lively impression of events. His imagination is powerful, and at times gets the better of him, leading him into the frequent representation of supposed scenes which, it is true, if they had taken place, would probably have occurred just as the author describes them. It seems to us, however, that this habit is destructive to historical truth, and unworthy of a scientific work. An example or two will show what we mean. The author, after stating that no contemporary has left any description of Vanozza, Lucrezia's mother, adds : "We are at liberty to represent her to ourselves as one of those powerful and luxuriant figures which are still to be seen in Rome. They have none of the grace of the ideal women of the Umbrian artists, they possess something of the greatness of Rome ; Juno and Venus seem united in them. They would resemble more closely the ideals of Titian and Paul Veronese, were it not for their black hair and dusky complexion. Blond and reddish hair has always been rare among the Romans."

So when he describes Lucrezia's childhood he says : "Lucrezia spent her early years without doubt in her mother's house. . . . We can easily imagine the arrangement of Vanozza's house, for there was but little difference in these things between the early Renaissance and the present day."

Then follows a description of the furniture, and the remark : "If Vanozza had any taste for antiquities, which we can only suppose in her because it was the fashion of the day, then such would not have been lacking in her salon."

On the 25th of July, 1492, Innocent VIII. died, and Rodrigo Borgia became a candidate for the Papacy. The contest between the rival candidates lasted until Rodrigo's election, August 11. Gregorovius's lively fancy immediately sees the future Pope's entire family (his niece Adriana Orsini, her daughter Julia Farnese, afterwards the

Pope's mistress, Vanozza and Lucrezia) importuning the saints with prayers and vows for the fulfilment of their hopes !

What, it will be asked, is the result of Gregorovius's investigations ; has the question of Lucrezia's guilt or innocence been definitely settled ?

We regret to be compelled to say that, without fault of the author, the result of his studies is merely a negative one. No evidence has yet been discovered which shows her complicity in the shocking crimes laid to her charge ; while, on the other hand, no one can read Gregorovius's luminous account of the court of Alexander VI., and believe it possible for a person situated as was Lucrezia to preserve her purity and innocence. However, the facts of her life are here for the first time laid before the public in anything like completeness, and it has all the data necessary for forming a judgment tolerably satisfactory to each individual mind. Although Gregorovius has not made the startling discoveries we were led to expect, he has corrected many errors committed by earlier writers ; even the date of Lucrezia's birth, the 18th of April, 1480, was not previously known with certainty. Her puzzling betrothals, their nullification, and her divorce are explained by the aid of newly discovered documents, and it is shown that many of the scandalous stories about her (especially her father's unnatural affection for her) were started by her first husband, Giovanni Sforza, her marriage with whom was dissolved under circumstances which bitterly exasperated him.

Lucrezia's life naturally divides itself into two parts, — her life at Rome, and at Ferrara, whither she removed in 1502 upon her marriage to the Crown-Prince of that state. The first division, it is needless to state, is the more interesting and important for the question of Lucrezia's guilt or innocence. For nearly twenty-two years she was under the direct control of her father and brother, most of the time the passive instrument of their ambition. She was married and divorced at their will ; her first husband was taken up for political reasons, and dropped when he had lost his importance. Her second husband, Alfonso of Aragon, the most tragic figure in the book, was married from similar reasons, but could not be gotten rid of so easily. So Cæsar Borgia had him waylaid one night on the steps of St. Peter's and covered with wounds. The unhappy Duke managed to make his way to the Pope's chamber, where Lucrezia fainted at the sight of her bleeding husband. She tenderly nursed him, and with his sister Sancia (Lucrezia's sister-in-law, the wife of Don Jofré) cooked his food for fear of poison. The Venetian ambassador wrote to the Signoria : "It is not known who

wounded the Duke, but it is said that it is the same person who murdered the Duke of Gandia, and threw him into the Tiber." Caesar Borgia, who is here intended, said to the same ambassador : "I did not attack the Duke, but if I had he would have deserved it." He even visited the invalid, and on leaving the room said, "What is not done at noon can be done at night." A few days after he came again in the evening, drove Lucrezia and Sancia from the room, and commanded one of his satellites to strangle his helpless brother-in-law. The body of the Duke was borne in silence to St. Peter's; and it gives us some idea of the small value set upon human life at that time, that the murder of a prince of the royal house of Naples aroused, as Gregorovius remarks, no more interest than the death of a Vatican groom. There is no doubt that Lucrezia loved her husband, and was terribly shocked by his tragic death, but it is one of the many proofs of her lack of deep feeling that within a year she dried her tears and began to think of another match. There are reasons to think that the marriage with Alfonso of Ferrara had been discussed in the Vatican during the lifetime of Lucrezia's unhappy husband, but there is no truth in Gibbon's statement ("Antiquities of the House of Brunswick," Posth. Works, Vol. II. p. 689), that "the marriage articles were signed, and as the bed of Lucrezia was *not then vacant*, her third husband, a royal bastard of Naples, was first stabbed, and afterwards strangled in the Vatican." Lucrezia's third marriage took place in the Vatican the 30th of December, 1501, and early in the following year she set out for Ferrara, where she remained until her death, seventeen years later. There can be no doubt of her exemplary life as Duchess of Ferrara, and it is useless to waste words on this part of her life. It is equally certain that all the slanderous stories (with one or two exceptions) circulated about her arose during the period of her Roman life, and we fear it will be impossible to make any one believe in her entire innocence during this time, although there is no foundation whatever for the outrageous accusations against her, as her unnatural affection for her father and brothers, her complicity in the death of the Duke of Gandia, etc.

In short, the Lucrezia Borgia of Gregorovius is a weak, characterless woman of a peculiarly amiable and winning disposition, who never would have been heard of if she had not been connected with the Borgia family. For many years she was the weak instrument of their ambition ; when a happy change occurred and she was surrounded by a purer atmosphere, she easily fell into a totally different

life, and her later years were distinguished by piety and charitable deeds.

She died in 1519, deeply lamented by her husband and subjects. Two days before her death she dictated the following letter to Leo X., which we give, as we believe it has never before appeared in English.

MOST HOLY FATHER AND VENERATED LORD.

With all possible reverence of mind I kiss the sacred feet of your Holiness, and humbly commend myself to your holy Grace.

After having suffered greatly more than two months on account of a painful pregnancy, I gave birth, as it pleased God, to a daughter, the 14th of this month at dawn: and hoped after it that my illness would be relieved, but the contrary has happened, so that I am obliged to yield to Nature.

And so great is the favor that our most clement Creator has shown me, that I perceive that the end of my life is near, and that I shall have left it in a few hours, having first received all the holy Sacraments of the Church.

And at this point I have remembered as a Christian, although a sinner, to supplicate your Holiness to deign in your goodness to give me of your spiritual treasure some help, with your holy benediction, for my soul, and so I devoutly pray you.

And to your holy Grace I commend my husband and children, who are all your Holiness' servants.

In Ferrara, the 22d of June, 1519, in the xiv. hour.

Your Holiness' humble servant,

LUCREZIA OF ESTE.

(In the Archives of Modena.)

This letter is so quiet and dignified, so free from all excitement, that we can well ask with Gregorovius: "Could it have been written by a dying woman whose conscience was really burdened with the sins attributed to Alexander's daughter?"

10.—*The Poetical Works of THOMAS CHATTERTON. With an Essay on the Rowley Poems by WALTER SKEAT, and a Memoir by EDWARD BELL.* London: George Bell & Sons. 1875.

IN a notice of Edgar Poe, Mr. Lowell pauses a moment to say that he "never thought the world lost more in the 'marvellous boy,' Chatterton, than a very ingenious imitator of antiquated dulness. When he becomes original (as it is called) the interest of ingenuity ceases and he becomes stupid." This criticism made one vaguely wonder whether the popular tradition or Mr. Lowell had estimated

Chatterton aright. It is hardly too much to suppose that the majority of possible readers, having a wholesome preference for their own tongue, had turned away affrighted at the hopeless jargon of Rowley and believed what was said by the ardent admirers. The undeniably precocious powers of Chatterton, his strange life and tragic death, have given a perhaps fictitious interest to his works. But nevertheless this interest has always existed, appealing as Chatterton does to the love of the marvellous in human nature. Whoever would give the world the opportunity to read and judge fairly of Chatterton's poetry would deserve well of men. This Mr. Skeat has done. The Rowleian dialect, so called by the new editor, has been subjected to a rigid investigation, resulting in the discovery of the system on which it was formed. It then became easy to translate the poems and give them to the world in an intelligible form.

It appears that Chatterton proceeded in a simple way. From Kersey's or Bailey's dictionary he copied all the words marked O (old), with their meanings, in reverse order, into a manuscript book. For instance, Kersey gives "cherisaunei (O), = comfort," which would appear in the note-book, "comfort, = cherisaunei." When a word thus entered was susceptible of more than one meaning, mistakes would be likely to occur. For example, Kersey has "lissed (O), = bounded," explained as "encircled by a list." This would be entered "bounded, = lissed." And thus given bounded might mean either surrounded by a list or leaped, and with the latter signification it is used several times by Chatterton. Another error of a somewhat different kind is curious. Kersey has "heck (O), = a rock," a misprint for rack. Chatterton uses it with its misprinted meaning of rock. Such mistakes, which abound, furnished Mr. Skeat with conclusive proof of the correctness of his results. Having then got a foundation for his dialect, Chatterton enlarged in three ways: by taking the groundwork of his word from Kersey and altering the termination; by altering the spelling of a word capriciously; and by coining words at pleasure either from some intelligible root or from pure imagination. In the whole vocabulary there is found to be only seven per cent of genuine old English words rightly used. The spelling is stolen entirely. It is the debased kind of Chevy Chace and the Battle of Otterbourn. Mr. Skeat, after stating that a language on this system may be readily acquired in a few weeks, gives an amusing instance of the ease with which it may be applied:—

"Offe mannes fyrste bykrous volunde wolle I singe
And offe the fruite of yatte caltysned tre,

Whose lethal taste into thys worlde dydde brynge
Both morthe and tene to all posteritie," etc.

The system and spelling are easy ; the real difficulty is to supply the matter. This Chatterton did, and this brings up the problem of editing in order to get at the matter of the poems. Four ways of solving this problem occurred to Mr. Skeat : to reprint the old text with old notes compiled from former editions ; to reprint the old text with sound critical notes ; to do away with needless disguises of spelling, and reduce them to the sufficiently uniform spelling of the fifteenth century ; or, finally, to do away with needless disguises, and on the supposition of their *not* being genuine to render them into modern English. Of the first method Mr. Skeat decided there had been too much already, that the second would be a mere infliction on the reader, and that the third was absurd, as the poems were not genuine, and in all cases, except where practically the language was modern English (as the *Bristowe Tragedie*), such reduction would have been impossible. The fourth method proposed was therefore boldly taken, and the poems with a few exceptions rendered into modern English. Oddly enough the diction was improved by this translation and the rhythm rendered more melodious, indicating that Chatterton had written in English and translated into Rowleyean. We have sketched only the results, but the ingenious processes employed to arrive at them well repay reading.

Thus, then, after a hundred years, the Rowley Poems are given to the world, stripped of all disguises, to stand or fall by their own merits. Passages of beauty which were hidden, together with the mass of bad lines under the language of Rowley, are scattered through the poems. Even those familiar with Chatterton will pardon the quotation of a few lines in their new form :—

" When Autumn sere and sunburnt doth appear,
With his gold hand gilding the falling leaf,
Bringing up Winter to fulfil the year,
Bearing upon his back the ripened sheaf ;
When all the hills with woody seed are white,
When lightning-fires and gleams do meet from far the sight ;

When the fair apples, red as evening sky,
Do bend the tree unto the fruitful ground ;
When juicy pears, and berries of black dye
Do dance in air, and call the eyes around ;
Then, be the evening foul or be it fair,
Methinks my heart's delight is mingled with some care."

There are feeling and imagination in these lines. The passage is from the Tragedy of *Ælla*, a composition chiefly remarkable for its very weak construction and the absence of all dramatic elements. Yet among the feeble crudities of the poem there are indications, faint though they be, of passion and power in these lines :—

“*Æl.* My better kindnesses which I did do
 Thy gentleness dōth represent so great,
 Like mighty elephants my gnats do shew ;
 Thou dost my thoughts of paying love abate.
 But had my actions stretched the roll of fate,
 Plucked thee from hell or brought heav'n down to thee,
 Laid the whole world a footstool at thy feet,
 One smile would be sufficient meed for me.
 I am love's borrow'r, and can never pay,
 But be his borrower still and thine, my sweet, for aye.”

In passing judgment on these lines, the extreme youth of the writer must be remembered. That Chatterton was little more than fifteen when he wrote this passage, does much to atone for the obvious faults. Besides its own merits, and beyond mere external resemblances, the poem has a distinct flavor of the Elizabethan period. This is apparent in all the poems, and shows that the boy's instincts were true, and carried him back often, to find models in the great age of English literature.

The Battle of Hastings, a long, dreary poem, containing a combat in each stanza, obviously written under Homeric influences, apparently exhibits nothing but Chatterton's unequalled power of spinning verses. Yet again, in all this waste of verses, we find a long passage descriptive of “Kenewalcha Fair,” another striking picture possessing beauty of imagery and language. After explaining who Kenewalcha was, the poet describes her as,

“ White as the chalky cliffs of Britain's isle,
 Red as the highest colored Gallic wine,
 Gay as all nature at the morning smile,
 Those hues with pleasaunce on her lips combine ;
 Her lips more red than summer-evening skyen,
 Or Phœbus rising on a frosty morn ;
 Her breast[s] more white than snows in fields that lien,
 Or lily lambs that never have been shorn,
 Swelling like bubbles in a boiling well,
 Or new-burst brooklets gently whispering in the dell.

" Brown as the filbert dropping from the shell,
 Brown as the nappy ale at Hocktide game,
 So brown the crooked rings that featly fell
 Over the neck of this all-beauteous dame.
 Gray as the morn before the ruddy flame,
 Of Phœbus' chariot rolling through the sky ;
 Gray as the steel-horned goats Conyan made tame,
 So gray appeared her featly sparkling eye ;
 Those eyes that oft did mickle pleaséd look
 On Adhelm, valiant man, the virtues' doomsday-book.

" Majestic as the grove of oaks that stood
 Before the abbey built by Oswald king ;
 Majestic as Hibernia's holy wood
 Where saints for souls departed masses sing ;
 Such awe from her sweet look forth issuing
 At once for reverence and love did call ;
 Sweet as the voice of thrushes in the spring,
 So sweet the words that from her lips did fall ;
 None fell in vain ; all shewéd some intent ;
 Her wordés did display her great entendément.

" Taper as candles laid at Cuthbert's shrine,
 Taper as elms that Goodrick's abbey shrove,
 Taper as silver chalices for wine,
 So taper were her arms and shape y-grove.
 As skilful miners, by the stones above,
 Can ken what metal is contained below,
 So Kenewalcha's face, y-made for love,
 The lovely image of her soul did show ;
 Thus was she outward formed ; the sun, her mind
 Did gild her mortal shape, and all her charms refined."

No doubt these similes are many of them marked by youthful faults and very grave faults, yet such a one as

" Gay as all nature at the morning smile,"

goes far to redeem other errors. These passages have been taken at random among many equally good. The excellences occur almost entirely in descriptive passages, as is certain to be the case with so young a poet. It must be admitted that there are indications of genius or something akin to it.

It is almost mere guess-work to attempt to fix Chatterton's place among poets. It can only be approximated by comparison with other

equally youthful productions. The long-since-withered Poetic Blossoms of Cowley are insipid to the last degree; Pope's frigid morality is destitute of any real feeling. One is forced to believe that the great poet of Queen Anne's reign was little better than a prig at the age of twelve. The Hours of Idleness, Kirke White's verses, the lispings of Moore, all of these and a host more show nothing but early power of smooth versification. Shelley and Keats exhibit widely different powers. Despite the metaphysical speculations which disfigure Queen Mab, passages of extraordinary beauty give no uncertain promise of the coming glories; and the Sonnet on Chapman's Homer stands alone in its perfectness among boyish productions. Chatterton more nearly resembles Shelley, not in quality or kind, but in the way his powers are shown. Apart from his marvellous fecundity, one finds buried in the mediaeval débris passages of real intrinsic beauty and strength. The rarity of this in juvenile verses entitles Chatterton to a high place, and speculation may fairly say that in the future, never reached, he might have been among the first.

In estimating Chatterton it ought to be taken into consideration that he did not form one of the links in the chain of literary development. He was sent into the world before his time. With the exception of Gray and a few poems by Collins and Goldsmith, it was a period of dust and ashes in poetry when Chatterton came upon the stage. The school of poetry which had been in its prime at the beginning of the century was in the last stages of dissolution. This dying school was commonly known as the didactic school of poetry. How great it could be Pope had shown. It was reserved to the latter half of the century to justify Canning's celebrated definition "that a didactic poem was so called from *didaskein*, to teach, and *poema* a poet, because it teaches nothing and is not poetical." The decadence of such a school was more than usually barren. Nature under Queen Anne was the pretty, trim nature of Windsor Forest; now she was a painted, artificial creature, with not even youth to plead for her. Against this Nature of form and fashion Chatterton revolted. His genius was imprisoned by conventionalities, and beat its wings wildly against the bars of the cage. The only thing of beauty in the sluggish life in the dull provincial town was the old Church of St. Mary's. To this church the fancy of the boy clung; here his genius found an outlet, and, repulsed by the every-day world, was driven back into the mediaeval one. The old church was a centre around which Chatterton's imagination wove a story, and in this fabric of his brain we find the real history of his life. The good burgher

Canynge, the poet-priest Rowley and his friends, the knights and ladies at the tournaments, the inexorable king,—these were the characters appearing in the romance which may be constructed from the poems. Here Chatterton was at home, here all was smiling and kindly. Horace Walpole might spurn him, but Rowley would not; and among the creatures of his fancy Chatterton found rest and peace. Outside all was harsh, bitter, and unsympathetic. To judge Chatterton as he was, we must go to the Rowley Poems, for there the real life was lived. In the weary years in Bristol, in the few short, mad months in London, the boy was acting a part. It is this distinction that makes the vast difference between the acknowledged and the Rowley Poems. Mr. Skeat follows Malone in thinking that the African Eclogues form the connecting link between the forgeries and the so-called genuine work. In this we cannot agree. They may be nearer than the others, but they are far, very far from the poems of Rowley. But whatever judgment the world may now render on Chatterton's poems, the story of his life will always remain full of intense interest, one of the great tragedies of English literature.

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O C T O B E R , 1 8 7 5 .

ART. I.—*The Character and Logical Method of Political Economy.* By J. E. CAIRNES, LL. D., Emeritus Professor of Political Economy in University College, London. New York. 1875.

WE have at the present day a large body of writers on a subject commonly known as Political Economy. This term is, etymologically considered, entirely inadequate to give any proper conception of the exact nature of the subject, and many attempts have therefore been made to find a more suitable name. That these attempts have failed will not seem wonderful, if we reflect that there has been no complete agreement as to what the thing is to which the name is to be given. It is, we believe, generally agreed that the thing either is, or aims to be, a science, and that its subject-matter is the production, distribution, and consumption of wealth. But this is a wide subject, the ramifications of which may include almost every human interest in the promotion of which wealth plays a part. The cultivator of each branch is desirous that that branch shall be considered an integral part of the science; and if the object of defining the science were to please the greater number of its cultivators, it would be advisable to give the term a pretty wide range. But the wider the range we give it, beyond certain narrow limits, the more confusion we shall introduce. If we examine the differences of opinion

between different writers, we shall find that many of them have their origin in fundamental differences respecting the objects and methods of the science. Now, it is obvious that the wider the range we allow, the greater the number and variety of the methods which may be allowed in its investigation, and the less the chance of giving any clear statement of what may be peculiar in the method. The only rational and complete mode of settling these differences is to find whether any peculiar method of arriving at truth which is or may be employed by the political economists exists. Then, any branch of the general science of wealth in which this method can be successfully applied may be considered a part of political economy.

Perhaps the most fruitful source of the confusion to which we have alluded is the failure to distinguish between the abstract or general principles of the science and the actual phenomena of human society in which these principles come into play. The latter are the product of a vast number of causes, some of which may be entirely ignored by the political economist, and it does not follow that if he fails in correctly representing them, his science is a failure. Yet many respectable writers seem to think that if they can find or even invent cases in which events do not occur according to the laws of political economy, they have disproved some of its principles. The insufficiency of this mode of proceeding may be well illustrated by a case from the physical sciences. More than two centuries ago Galileo discovered the law of falling bodies, expressed by saying that a body falls sixteen feet the first second, three times that distance the next second, five times the third second, and so on. This is one of the best established laws of mechanics ; yet, if we attempt to verify it in nature, we shall fail, for the reason that the law takes no account of the resistance of the air. Is it therefore no law at all, but only a delusion and a snare to those who attempt to apply it ? Were we to adopt the system of one half the critics of political economy, we should have to say yes. For instance, the most criticised theory to be found in any standard writer on the subject is, we believe, Ricardo's theory of rent. Its refutation has, in this country at least, almost become fashionable. And the task of refuting it, as a concrete law actually carried out in human society, and accounting for

the rent of land everywhere, is very easy. It cannot be denied that it rests upon hypotheses which, if true at all, are true only in very limited districts or under special conditions, and that it may be modified or entirely reversed by causes of which Ricardo took no account.

And yet, we believe this most abused theory to be, if not the expression, at least an illustration, of one of the most important laws of political economy. The criticisms upon it are much like those of one who should show that Galileo took as the fundamental basis of his law the hypothesis that there was no atmosphere, and should descant upon the absurdity of calling that a law of nature which could only be verified above the air, where no human being could ever go to try the experiment. Granting the hypothesis of Ricardo, his conclusions inevitably follow. And, though not unmixedly true in the case of land, yet his law has its analogue in every case in which a commodity or a faculty in any market commands a high price from being limited in supply. The incomes gained by the ability of an eminent lawyer, the skill of a man of business, the ownership of a valuable mine, or the invention of a new machine, might be shown to be cases in point.

It is but a few years since our whole science seemed to shake from an attack by Mr. Thornton upon some of its fundamental principles, and especially upon that best-grounded one of all, the law that supply and demand govern price. He instanced the Dutch auction of fish on the shores of the British Islands, and the sale of a horse or a house under hypothetical conditions, thereby proving that supply and demand would not control price in every possible case. But this looking up of cases in which the law did not operate was really no more a disproof of the law, than the discovery of a mountain would be a disproof of the rotundity of the earth.

The foregoing examples will serve to illustrate the first point we wish to bring to attention. Concealed as it were within every logical system of political economy is the framework of an abstract science, of which the doctrines actually taught are little more than applications. The same thing is true of applied mechanics, but in this case the abstract science is taught and studied apart from its applications. There is an

abstract science of equilibrium and motion, in which is traced the operation of certain laws, learned by induction. These laws are in operation in every piece of machinery which man can construct, and without a clear understanding of them it is impossible to understand the machine. It is true that any one who expects the machine to operate according to any mathematical formulæ derived from those laws may be deceived, but this is not from any want of knowledge of the laws themselves, but from ignorance of the exact conditions under which they operate. Knowing these conditions, the operation of the machine can be predicted with entire certainty. But, if we examine the courses of political economy taught in our colleges, or even the works of the ablest writers on the subject, we shall find no such clearly drawn distinction between the abstract science and its application. It is not unlikely that one half the writers on the subject might even deny the existence of any such abstract science of wealth, apart from its applications; we shall therefore endeavor to show not only that there is such a science, but that it has many of the marks of an exact science.

If we were required to state at the outset what this science is, we should define it as the study of the mode of operation of those causes which affect the production, distribution, and consumption of wealth, in so far as they act through human volition. The necessity for this limitation will be evident on reflection that the introduction of human volition brings in causes of a character different from those which act where it is not an element, and that the latter class of causes belong, for the most part, to the physical sciences. For example, the state of the weather is a very powerful agent in affecting the growth of agricultural products, the amount of wheat or cotton produced in any one season being very largely influenced by the season. The study of this cause belongs, however, to agricultural chemistry and botany, not to economy. But, the prospect of a good crop inducing the farmer to sow a large area in wheat would be an example of the operation of an economic cause, because it would be one acting through the volition of the farmer.

That there are a great number of causes, acting through hu-

man volition, and affecting the production and distribution of wealth, the operation of which can be traced with entire certainty, will not, we conceive, be denied. That the higher the price of any article of wide consumption, the less can be sold in any market ; that the scarcer and more difficult of production it becomes, the higher its price will be ; and that taxes operate in a certain knowable way in raising the price of the goods on which they are levied,—are propositions which none will be found flatly to deny. The province of our abstract science is neither more nor less than to furnish the means of tracing every cause which can thus affect the quantity, price, and final disposition of the exchangeable products of human labor. The existence of means of transportation, the demands for commodities constantly arising from the taste or the caprice of men, the prospects of the crops, the invention of improved means of production, and the statute laws of different places affecting the sale of goods, are examples of the innumerable causes in question. Every circumstance which affects the willingness of large masses of men to buy or sell any particular article is an economic cause affecting the price of that article.

A corollary from these views is that every new and correct explanation of the mode of operation of a cause in the commercial world is a valuable contribution to our science, no matter how rarely that cause may act, nay, no matter if it never goes into actual operation at all. The error commences only when it is wrongly assumed to be in operation. Every writer on the subject, from Adam Smith downward, who has had any clear conception of causes at all, has given us something of value, and deserves to be honored by the philosophic critic for what he has thus done, rather than condemned because he may have supposed conditions which were peculiar to his country or age, or which did not exist at all ; just as we honor Galileo for discovering the law of falling bodies, though it is never carried out in nature.

Real progress in science does not, however, consist so much in the discovery of new cases, or new modes of operation, as in the reduction of all laws to their simplest and most general form. Thus, the numerous and complicated laws of the cele-

tial motions were reduced by Newton to the one law of gravitation toward each other ; and Lagrange reduced the whole of abstract mechanics to a single equation, in the development of which he made the science to consist. Abstract political economy is susceptible of a similar reduction, the fundamental principle of which is that each man seeks to employ his productive powers in the way which will yield him the maximum amount of enjoyment. But the problem of tracing the action of this principle through the complex conditions of human society is a much more intricate one than any met with in abstract mechanics ; and however completely it may be ultimately found to answer its purpose, those economists who apply it have not yet succeeded in securing that common assent to all their conclusions which is granted in the case of the physical sciences. Still, as we shall presently endeavor to show, it is on this fundamental principle that economic science must rest.

We have, we trust, made it clear, from what precedes, that there are some general principles by which the action of causes in the industrial world can be traced, and that in the study of the mode of operation of these causes we have the development of an abstract science. We have now more fully to justify our limitations of the causes to be considered to those acting through human volition. If we examine the field of abstract political economy as occupied by the great writers on the subject since Adam Smith, we shall find that this limitation defines it with a good deal of precision. The production, exchange, distribution, and consumption of wealth are all human acts. Although natural forces come into play in all these processes, nay, although the whole process may really be brought about by these forces, man merely setting them in operation, yet their action does not concern the economist, but only the physicist. We can readily trace the distinction between these two classes of forces through all the great operations of industry.

Let us begin with production,—the manufacture of cloth, for instance. The growth of manufactures is constantly spoken of as if it were analogous to the growth of a tree ; and, no doubt, many a paternal statesman finds his policy on the

tacit assumption of this similarity. But in what does the growth of the manufactures of a nation consist? Examination will show that it consists entirely in the erection of individual manufacturing establishments by men who have money to spare for that purpose, and who believe, in each particular case, that it will prove a profitable investment. The belief of a number of men of wealth that the factory will prove profitable is the cause of the factory, without which it would not exist, and with which it is sure to appear. But this cause acts only through their volition. When the economist shows how a careful estimate of the cost of building and running the factory, of the price which may be obtained for its products, and of the consequent profits which its owners may expect, leads to its erection, his functions with the building end, and the architect and engineer come in and execute the work.

The machinery all ready for use, operatives have to be hired and wool purchased, when economical laws again come into play. Whether Jones, operative, will give his services for two dollars per day, is a question which can be decided only by Jones's own volition. His volition is indeed determined by his taste for the work and the wages he can command elsewhere; but the acceptance or refusal of the terms is undoubtedly an act of volition, and not the operation of a physical cause. So, also, the price which the manufacturer must give for raw material—wool, for instance—is that at which the producers choose to sell it; and, however wide may be the range of causes which lead them to fix their prices, the final exchange is a matter of choice with them.

In the same way, the price at which the finished cloth can be sold depends on the value set upon it by those to whom it is sold, and it is quite optional with the latter to accept or refuse it at the price offered. We may say, with entire certainty, that the factory must sell cheaper than any foreign establishment which formerly supplied the market could supply cloth of similar quality. But it remains none the less true that the paying of any price for the cloth is a human act, and must be considered as such in any sound philosophy of the subject.

We thus see that the effect of building the mill, and indeed the whole question of its success or failure, is as completely

dependent upon human volition as is a question of war or peace. The only difference is, that in the one case the question is decided indirectly, and in the other directly. The fact that volition is exercised in an entirely different way in the two cases — that there is no meeting of patriotic citizens to decide the fate of the factory, and no official judgment upon it pronounced in any quarter — does not in any degree weaken the position which we maintain. Moreover, causes of the class we are considering are the only ones the range of which comes within political economy. The wear and tear of the machinery, the character of the country, and the quality of the material are very important elements in determining the fate of the establishment; but their consideration belongs to engineering and commerce, not to political economy. Finally, as the success or failure of the one factory is a powerful agent in leading men to decide whether they shall build another, we may say that the growth of all manufactures depends on human volition.

In so strongly insisting on human volition as a link in every economical chain of causes, we must not be understood as countenancing the vulgar notion that the prices of certain things — public securities, for instance — are arbitrarily fixed every morning by the brokers over their coffee. The will of any individual is as powerless in altering economical laws as it would be in altering the course of nature, and this for two reasons. In the first place, the individual will itself is very largely, though unconsciously, governed by these very laws; since every man who spends his income so as to procure for himself the maximum amount of gratification is simply acting in exact accordance with the fundamental principle of political economy. In the next place, the phenomena of our science are not the acts of individuals, but of great masses of men, and it is only among great masses that most of its laws are exemplified. There is much that is changeable and capricious in the wants of the individual, and to bring laws into play the mass must be so great that the caprices of individuals are no longer felt. Then the law of averages comes into play, without which there could hardly be such a thing as social science. Each individual is then only a

drop in an ocean ; and however the drop may be beaten about by the winds, the ocean preserves its bounds unchanged.

Having thus shown that the phenomena with which the science of wealth is mainly concerned are really phenomena of human volition, the next question in logical order is, How are these phenomena to be investigated and brought under the domain of law ? The answer of a very large body of intellectual men of the present day, and possibly that of the greater part of the intellect of the world, will be that human acts, considered in the mass, are to be studied in the same way that modern science studies the course of nature. The general reaction which we are now witnessing against the speculative philosophy of the past tends toward the view that man himself is as completely subject to natural law as is the merest atom, and must, therefore, be studied by the same methods which have been so successfully applied to the physical sciences. Curiously enough, in the case of political economy, this tendency falls in with a mode of thinking into which nearly the whole world is prone to fall in reasoning on economical subjects, and which consists in considering the community only as a mass, and forgetting that the mass is made up entirely of individuals, and that the acts of the mass are only the sum total of the acts of individuals. Now, while human volition, from a scientific point of view, is as completely subject to laws as are the operations of nature, the laws are of an entirely different kind and to be studied in an entirely different way.

The fundamental difference which we wish to elucidate is this : the operations of nature depend entirely on antecedent causes, whereas deliberate human acts are the result of what the older philosophers might have classed as final causes. That is to say, some result of the act, or, to speak more precisely, some expected result, is itself the cause of the act. The cause of all the phenomena of political economy is the desire of mankind to enjoy wealth, or the fruits of wealth ; and it is the prospect of this enjoyment, and not the antecedent conditions, which is the proximate cause of the efforts of man to acquire wealth. This distinction between the laws of human action and those of the course of nature is so fundamental, not only in our present inquiry, but in the philosophy

of physical science, that, elementary though it be, we may be pardoned for endeavoring to elucidate it further. In the answer which the common-sense of intelligent mankind now returns to the questions,

“When the loose mountain trembles from on high,
Shall gravitation cease if you go by ?
Or some old temple, nodding to its fall,
For Chartres’ head reserve the hanging wall ?”

we have the postulate of modern science, not a principle which it seeks to prove, but one which it adopts as the basis of investigation. Perceiving a certain phenomenon, it assumes it to be the result of some previous conditions and of some knowable and invariable law or laws, and thence seeks to discover what is the law or what were the conditions. In no case does the result of the phenomenon enter as an element into the investigation of its cause. It is not necessary to see who stands under to determine when and how the stone will fall. The motion of a storm-centre across the ocean takes place without any regard to the ships it may encounter, and a ship drifting in the current moves without regard to the storm which is coming.

Entirely different is the case when the ship is under human guidance. If her navigators are acquainted with the course of storms, she moves aside to avoid the storm, and, in any case, her sails are reefed as soon as the barometer falls. If we had to explain this phenomenon by the postulate of physical science, we should have to say that it is a law of nature that ships reef their sails when the barometer falls suddenly, or, to speak more scientifically, when the pressure of the air rapidly diminishes at the point where the ship is found. But this would be a misuse of words, for it cannot be necessary to show that, how invariable soever the rule may be, it has not the characteristics of natural law. The sails are reefed, not in obedience to a knowable law, but in order that certain evils which would result from not reefing them may be avoided ; whereas, so far as we can see, no natural law operates “in order” that any result may follow.

We have, therefore, a necessity of some postulate which in the investigation of human acts shall take the place of the

postulate of physical science already referred to. In the case of political economy, this postulate is found in the unlimited desire of civilized man for wealth and its fruits, and the limitations placed by nature on the gratification of that desire. Man is thus obliged to recognize an order of preference in his wants, and is led to satisfy those which are most pressing before he attends to those which are less so. As natural science assumes the operations of nature to depend in an invariable way upon antecedent conditions, so modern political economy assumes man to be a provident and reasonable being, who employs his labor so as to secure for himself, so far as he can foresee, the greatest possible return of wealth and the maximum of enjoyment. As the explanation of a physical phenomenon is complete when the antecedent conditions on which it depends are shown to exist, and the law of connection is stated, so the explanation of any economical phenomenon is complete when it is shown how it resulted from the efforts of men to secure the greatest return from their labor.

The much-discussed decline of American commerce and ship-building may afford us one out of many illustrations of the principles we are seeking to establish. This decline may be called, in strictest scientific language, a politico-economical phenomenon, and it is a phenomenon the explanation of which has occupied the thoughts of our statesmen for several years. Viewing it from the stand-point we have taken, it is as completely a deliberate human act as is the reefing of the sails of a ship. Our people can build ships and sail them just as well now as they could twenty years ago, only they do not choose to. Why do they not so choose? Clearly no one can answer this question so well as the men who formerly built ships and have now ceased to do so, since every man must know best the reasons for his own acts. And when they tell us, in detail, the motives which influence them, we have a complete answer to our question, so far as the proximate cause is concerned. No one would doubt that this cause is to be found in the fact that it does not now pay so well to build and sail ships as it formerly did. While, in former years, this was the most profitable employment in which the men in question could employ their capital and time, this is no longer the case, either

because other employments have become more profitable, or this one less so.

Supposing the latter to be the cause, the next question in logical order would be, Why this diminution of profits ? This question can be answered only by an examination of the book accounts of the ship-builders, showing on the debtor side what it cost to produce a ship, and on the creditor side what the ship sold for. If the principal changes for the worse were on the former side, it would be necessary to trace up the causes in the increase of price of the principal articles which enter into a ship. Here, as before, we should find the question to be one of human motives. To say that timber now costs more, is simply to say that the owners of that commodity now refuse to sell it so cheaply as formerly. If they could not produce it so cheaply, it would be because laborers charged more for their services, which would again be caused by an expectation on their part to profit by asking higher wages. We should pass out of the chain of causes acting through the hopes and fears of men only when we reached the purely physical conditions on which depends the production of articles necessary in building a ship; such conditions, for instance, as the exhaustion of forests, the subsidence of rivers, or the changes of climate: and then we should pass out of the province of economical science entirely.

Summed up in a single sentence, the position we maintain is that the causes which operate are not antecedent conditions, but results to be attained by the effect itself; just as an immunity from damage, to be attained by reefing the sails of a ship on the approach of a cyclone, is the cause of the reefing. To this it may be objected that the real causes are as truly antecedent in this case as in the phenomena of nature; that the reason why the sails are reefed is not that a storm is coming, but that the sailors believe one to be coming; that this belief is an antecedent condition which will result in the effect, even if there be no storm; and, finally, that the belief is the result of certain inductions from past experience, so that in any case the causes must be antecedent. This view is, in philosophical strictness, perfectly correct, and we have been careful to say that it is the expectation of a result, and not the result itself,

which is the cause of human action. But it is none the less true that, if we attempt to found our science on observable antecedent conditions, entirely ignoring the consequences, as in the case of physics, we shall wholly fail. Nothing can be gained by ignoring the fact that man shapes means to ends, but one of the most precious instruments of investigation will be thrown away. To take a single example, suppose we wished to inquire whether the price of cotton was in any way influenced by reports of the kind of weather which prevailed in cotton-growing districts. The physical method would be to compare the weather reports with the price of cotton through a series of years, and find whether, on the whole, the price rose or fell after particular kinds of weather had been reported. This would be the method of the average editor and the average congressman ; and if the latter should prove a theory of the subject by statistics extended through a generation, he would probably receive more praise from his constituents for founding his theory on facts, than blame for want of sense. Yet, his result would prove nothing, because the price of cotton is affected by a variety of other causes, the effects of which it would be impossible to separate by such a method of proceeding.

The economical method would be to find, as a matter of fact, or yet more accurately as a matter of opinion among the wholesale dealers in cotton the world over, what kinds of weather are favorable to the cotton crop, and what kinds unfavorable, and in what degree. He then would say that reports of the first kind would tend to lower the price, and of the latter to raise it, and no amount of statistics to the contrary could disprove his position. They would only show him that other causes than weather reports had influenced the price.

The main objection to ignoring final causes is the impossibility of otherwise separating cause from effect. Suppose we wished to find whether increasing the price of an article tended to make it plenty or scarce in the market. It would be very easy to prove by statistics that whenever the price was high the article was scarce, and when it was low the article was plenty. The conclusion of blind induction would be that if it

is in the power of the community, as it is in some cases, to regulate the price at which an article shall be sold, the lower it is fixed the more plentiful the article will be. There is, in fact, no proposition in financial science admitting of more apparently conclusive proof from statistics than this. It can hardly be necessary to say to any intelligent reader, that the fact is directly the opposite, since raising the price stimulates men to produce and import, while lowering it has the opposite effect.

Could more examples be needed, the reader would find plenty of them in the writings of Mr. Carey and his disciples, and especially in that author's "Principles of Social Science." Mr. Carey may almost be said to have founded a school, the fundamental principle of which is the ignoring of human motives and human sufficiency, and the consideration of man as an atom impelled by forces of the same kind as those which act in nature, against which he is entirely powerless. Ranging over the whole of history for his premises, and recoiling from no absurdity in his conclusions, his pages are full of results as completely at variance with fact as is the conclusion we have just cited respecting the relations of price to the supply of commodities. The absence of logical method and scientific ideas from his pages does not detract from the value of his conclusions as warning examples, because no logical acumen is required to draw conclusions in this manner by the blind application of the principle, *post hoc ergo propter hoc*.

If we examine the method of the writers who have really contributed to the advance of economical science during the present century, we shall find their common characteristic to be the recognition of man as a being acting from motives, adapting means to ends, and always choosing that course which, so far as he could see, was best adapted to forward his interests; while the absence of such recognition is the mark of nearly all the speculation on economical subjects which has no logical basis. If we examine the arguments of those who oppose the views of political economists, whether in the matter of protective tariffs, irredeemable currency, governmental interference with the hours of labor, or regulation of the prices of commodities, we shall find that they tacitly ignore any adaptability in man, and place him as completely at the mercy of

external forces as if he were a ship drifting about in the ocean. In Mr. Carey's philosophy, merely allowing him to trade will result in causing him to do such foolish things as selling hides at a sixpence and buying back the tails at a shilling. Mr. Wendell Phillips maintains that the rate of interest which men must pay throughout Great Britain, and we are not sure but throughout the world, is determined from day to day by the governors of the Bank of England. The advocates of an irredeemable currency believe that, by the liberal introduction into commerce of suitably embellished pieces of paper, each declared by authority to represent an appropriate number of dollars, men will be made active and industrious, and will at once proceed to exchange a great number of products; while without them laborers will stand idle in the sight of factories and starve in the midst of plenty. The question, what motive men could have in acting thus unwisely, or how their freedom can be thus hampered, is one which they never consider.

We are now in a position to apprehend clearly what political economy, considered as a pure or abstract science, is, and in what manner it is to be developed and applied. The hypothetical data with which it sets out are an indefinite multitude of men, each urged by an indefinite series of desires, but with only limited means of gratifying those desires. Each man is at the same time the producer and consumer of a limited portion of those objects of desire. But, between his positions as producer and consumer is this essential difference: while he consumes a great number of commodities, his production is practically limited to one, at least at any one time. By exchanging this one with his fellow-men, he receives from them in return as many of their productions as he can induce them to give. To make the terms of the exchange definite and ascertainable, a common measure of value is necessary, and this measure is afforded by money. One advantage of money is that of enabling the producer to determine directly what commodity he can most advantageously produce, this being the one which yields him the maximum money income. Amongst the innumerable employments open to each individual, he is supposed to choose the production of this commodity, allowance being made for any agreeableness or disagreeableness in the employment.

The laws of production and of consumption are at first to be considered separately and independently. The law of consumption is known when we have found how much of each individual commodity the community at large is ready to purchase at any given price. For instance, if the price of flour were four dollars per barrel, a certain number of barrels is supposed to be given which the population of the country is ready to buy and consume at that price; to five dollars would correspond another and smaller number; to six, a yet smaller number, and so on. Mathematically speaking, the consumption is given as a function of the price, or, in ordinary language, there is a determinate relation between the price and the consumption, which is supposed to be among the data. This relation is entirely independent of production, the latter only helping to determine what quantity shall be produced at any given price, or what shall be the price of production. The latter being given, the foregoing relation immediately determines the amount consumed. It may be necessary to explain that, for the end now in view, a commodity is considered to be consumed when it has reached its final destination.

The corresponding datum for production is the producing capacity of each individual for each commodity. This capacity may be expressed by the amount of each commodity the individual is capable of producing in some definite time, say a year, and depends partly on natural and partly on acquired qualities. It was one of the faults of the economy of Adam Smith and his immediate successors, that differences of natural capacity for various sorts of production were ignored. It is now well understood that the numbers from whom the highest intellectual efforts can be obtained, by any amount of training, are limited by nature; that a hod-carrier, in fact, could never have been educated into an eminent lawyer, no matter how much capital might have been sunk in the attempt.

Finally, production and consumption are necessarily connected by relations expressed in the following two rules:—

(1.) The quantity of each commodity produced is equal to that consumed (or sold).

(2.) The money value of each man's total production is equal to that of his total consumption.

With the data we have set forth, the problem, to determine *a priori* the industry of a community or of a world, becomes a completely determinate one ; that is to say, it is possible to deduce, by strictly logical operations, in what production every man or class of men can most advantageously engage, what price they will obtain for their products, and what products of others they will spend their money for. In the mathematical method by which this result would be obtained in any given case, we have a pure or abstract science, in itself as exact as any other pure science. The exactness with which it could be applied in any particular case would depend on the exactness of the data ; and the fact that these might not be accurately attainable would not detract either from the exactness of the pure science or from its value measured by a purely intellectual standard.

A little consideration will show that the data we have supposed are not all that are necessary in the rigorous application of the science to the case of actual human society, but that many disturbing causes come in. We have, for instance, taken no account of capital as an agent of production. In the complete investigation of the subject, each kind of capital would be regarded as a commodity until it reached its final owner, when it would become an instrument increasing his capacity for producing some class of commodities. Thus, with the increase of capital, the capacities of the owners for production would undergo a continual change which would have to be taken into account, and would make the problem yet more complex. Again, there would be some modification in the problem whenever any combination among all the producers of any one commodity to charge the same price might be entered into. This cause would be allowed for, by supposing the class to act as a single individual, possessed of the aggregate capacities of production of the class. Each individual has been supposed to produce a finished commodity, which he sold directly to the final consumer or employer. But, as a matter of fact, each commodity requires the services of a number of producers in succession. Still another modification of the analysis would be required to take this fact into account.

None of these modifications would interfere with the logical determinateness of the problem. A science of industrial dy-

namics is therefore possible, and this science will stand in the same relation to sociology and to practical statesmanship that physical dynamics does to physics and engineering. As the solution of a problem in dynamics is complete when, from the forces which act on a body, we determine its position and velocity at any time, so a problem in industrial dynamics is complete when we have determined the quantity of the commodity in question produced and sold under given conditions, and the price at which the sale is made.

When we say that the sole object of our science is to find the means of determining the quantity and price of each commodity under all conditions, it may seem that we are confining it to very narrow limits ; that, in fact, only a small portion of the great work of Adam Smith, or even of recent works, is devoted to the investigation of the problem of quantities and prices. But a glance will show that the problem in question does really cover a much larger portion of the economical interests of the community than would at first sight be supposed. Let the question be that of the expediency of levying an excise duty on iron. The legislator asks the economist in what manner such a duty will affect the interests of the community. Supposing his methods and his data to be sufficiently complete, the economist would reply by furnishing a statement of the following particulars, corresponding to each and every proposed rate of duty :

Number of tons, by which production of iron would be diminished by the duty ;

Increase in price per ton at which it would be sold ;

Percentage of diminution in wages of producers ;

Percentage of hands who would change employments in consequence of this diminution of wages.

These results being given for each rate of duty which it might be proposed to levy, it is clear that the legislator would have means of judging whether any excise duty should be levied, and what should be the best rate, in a degree of completeness and perfection which no one ever before thought of. Yet, the data presented him would only be quantities produced and prices of selling under hypothetical conditions. The degree of exactness and certainty with which they could

be actually presented would depend entirely on the accuracy of the knowledge possessed by the political economist respecting the variations in the consumption of iron produced by the variations of price, and the capacities of the men engaged in the production of iron for producing other things. That the problem would be a determinate one when these data are given will be evident to any one having a clear conception of cause and effect under circumstances so complex. But can data be found sufficiently exact to lead to a solution that shall have any practical value? If we answer this question in the negative, it will be equivalent to saying that there is no possibility of foreseeing the effect of a duty on iron, since such foresight can be attained only by reasoning from some principles and data assumed to be true. If this were the case, a tax would have to be levied in entire blindness. The very fact that legislators and editors attempt, in discussing a duty, to point out its effects, shows that they believe themselves in possession of data and principles for foreseeing those effects.

To ultimately expect from political economy results of such certainty and exactness, that it can present the legislator with numerical predictions like those we have described, is by no means hopeless. To attain this end it is not necessary that we should be able to foresee the effect of all causes on the iron market, and hence the exact price of iron, but only the effect of such duty as may be levied, and the consequent difference between the circumstances of the trade, price, quantity, etc., if no change be made, and these same circumstances under the proposed duty. This difference may be predicted with entire exactness when the absolute price may be incapable of being foreseen in either case. We can say with entire certainty that to burn one fourth of the crop of wheat next year would make flour dearer than to preserve the whole, and it might be possible to say how much dearer. But it would be very unsafe to predict a higher price than that of this year, because good crops the world over might make good the destruction.

That the degree of exactness in treatment and prediction here described can be attained only by mathematical methods, is a proposition which we would not stop to maintain, were it not disputed by many high authorities, and distrusted by a

large portion of the intelligent community. Quite surprising is it to see Mr. Cairnes, one of the ablest and clearest of recent writers on the logic of political economy, and one whose ideas seem quite in unison with those expressed in the first part of this article, maintaining that mathematical methods cannot be successfully applied to economic investigations. Such a proposition must, we conceive, arise from some misapprehension of the nature and objects of the mathematical method. Mathematical analysis is simply the application to logical deduction of a language more unambiguous, more precise, and, for this particular purpose, more powerful than ordinary language. That a vague and indefinite language can for any purpose of thought be better than a precise one, no one will maintain, and the dispute must turn upon the question, whether it is possible to express the propositions of political economy in mathematical language. In this Professor Cairnes seems to labor under some extraordinary misapprehension. He conceives that mathematics cannot be applied to the development of economic truth, "unless it can be shown either that mental feelings admit of being expressed in precise quantitative forms, or, on the other hand, that economic phenomena do not depend upon mental feelings." The answer to this is so obvious, that it seems almost superfluous to express it in words. It is not degrees of mental feeling which it is necessary to express in numbers, but only the phenomena to which these feelings give rise. The price of consols depends on the opinions and feelings of men respecting the money market, and these feelings can certainly not be expressed in any quantitative form. But this throws no obstacle in the way of the precise quantitative statement, that on a certain day consols sold at $92\frac{1}{4}$. It would be utterly hopeless to attempt expressing hunger and thirst in numbers. But this fact does not make it impossible to say precisely how many barrels of flour the inhabitants of a city have consumed in a given period, nor how many they are likely to consume in time to come.

The more common and weighty argument against such applications of mathematical methods is that, owing to the necessary inexactness of the subject-matter, it is impossible to obtain precise quantitative results in any economical investiga-

tion. This argument applies only to political economy as an applied science. One of the principal objects of the present discussion has been to show that, back of applied economy, there is a pure or mathematical science, which admits of as much rigor of mathematical treatment as any other branch of pure science, and to this science the objections under consideration do not apply. The only question left open is that of the utility of attempting to apply the rigorous formulæ and methods of this pure science to the actual case of human interests, in which precise data are generally unattainable. We reply that at worst no harm can ever result from the application of a rigorous method and a precise language, while we thereby enjoy the undeniable advantage of greater precision of thought. If we do not attain accurate results, it is not because they are inherently unattainable, but because we are ignorant of some of the requisite data. Economical phenomena really occur according to laws as exact as those which control the elements. The number of barrels of flour consumed in the city of New York during the ten years 1865–1874, and the number of dollars paid for them, is now susceptible of exact numerical statement. The reason it was not susceptible of such statement ten years ago, is that the necessary information respecting future crops, population, and other matters was not attainable.

It is quite likely that we have devoted to the refutation of this unscientific opinion more space than it deserves, since, as a general proposition, it admits of direct overthrow by a single appeal to the commonest acts of the mercantile world. Arithmetic is a branch of mathematics, and is applied only to the expression of precise quantities; while the business of the world, and *a fortiori*, that of each individual man of business, is necessarily dependent upon a multitude of indefinite and uncertain agents, human opinions included. Yet every individual merchant does keep all his daily transactions subject to exact numerical calculation, and does find his reward in so doing. If the arguments we are combating were resorted to, they would lead to the conclusion that the merchant might gain something by substituting shrewd guesses for exact calculation in the transaction of his business.

It will conduce to clearness if, before going further, we sum up the conclusions to which we have been led in a few brief propositions.

Viewing the industrial activity of a country as a connected whole, it presents to our consideration a network of phenomena comprising the production of a multitude of objects of utility to man, their transportation from one place to another, their transfer to various owners, and their ultimate attainment of some destination in which they fulfil the end for which they were originally produced. This end is the gratification, directly or indirectly, of some human desire. The science which investigates the causes and relations of these phenomena is political economy.

These phenomena are, from an economical point of view, controlled and directed by man, and may, therefore, properly be considered as phenomena of human volition. They are not reducible to laws of the same kind as those which govern the operations of nature, where every phenomenon depends in a determinate and invariable manner on conditions antecedent to and surrounding it, which conditions are, phenomenally, its cause. The cause of every step in the production of any object of human desire is the good which that object is expected to produce; and it is only by learning what that good is, that any complete theory of the production can be formed. Any system or any method of investigation which presupposes the acts of man in carrying on the operations presented to our view in the industrial activity of the world to be governed or directed by any other cause than the belief on the part of each individual man that he is thereby attaining the greatest good his exertions can secure him, is founded on a false basis, and can lead to no valuable result.

The explanation of an economical phenomenon is complete only when it is shown how the actors who brought about that phenomenon, under the circumstances in which they were placed, found or believed the acts which brought it about to be those most conducive to their good.

The manner in which man can best attain his ends depending on the circumstances in which he is placed, his acts are influenced by those circumstances. Economical phenomena

are thus affected by a multiplicity of causes, the combined effect of which can be determined only by analyzing the separate action of each. The investigation of any one is economically complete when it is shown how it causes, or might cause, man to act in his effort to attain the maximum good. Any such investigation is a contribution to economical science, whether the cause investigated has or has not an objective existence.

In the general principles according to which economical causes act in influencing human volition, we have the elements of an exact science, susceptible of being treated by mathematical methods with mathematical rigor. This science is based on the general character of civilized man, and especially on the indefinite extent of his desires for objects which he can obtain only by exchanging services with his fellow-men. Its mathematical magnitudes are quantities of products and values. The latter is an element peculiar to economic science, and measures a quality of the object which may be dependent on all the causes which influence its production.

In applying this science to any special problem, or to the circumstances of mankind in any particular country, the exactness of our results will be measured by that of our data, which it can never exceed. If an inexact method be applied, its uncertainty will be added to that of the data in the effect upon the final result.

The pure science is the same everywhere and at all times, so long as human nature and the general condition of mankind remain unchanged. In applying the science, regard must be had to the particular circumstances of each case. Hence, each country may be said, in a certain sense, to have an applied political economy of its own, though it would be inexact to consider results of this application as a scientific system.

The foregoing discussion of the method of political economy as a science will enable us better to understand its relation to kindred branches of inquiry. As we have defined it, it covers but a small portion of the ground occupied by the general subject of sociology, or even by most treatises of political economy. There is a class of thinkers, too numerous and influential to be ignored, who view such limitations with ex-

treme disfavor, and consider them as marks of a certain narrowness of view on the part of the economists who make them. Their idea seems to be that the economist tacitly assumes everything in sociology outside the limits he sets as comparatively worthless, or, at least, as of not enough importance to merit his consideration. It would be interesting and instructive to have before one all the criticisms which have been directed against Mr. Mill's celebrated definition of the field of our science, in which he says that it considers mankind as occupied solely in acquiring and consuming wealth. The general opinion of the critics seems to be that this implies a most narrow, grovelling, and selfish view of human nature and human motives, and entirely ignores the higher aspirations of humanity. The fact that the criticism was equally applicable to algebra, so far as ignoring many noble things is concerned, does not seem to have been generally remarked by its authors. The reason for limiting the range of the science in the way we have done is simply to avoid confusing branches of inquiry, which have to be pursued by different methods. The method of political economy is peculiar, and is practicably applicable only to the acts of man in the pursuit of the enjoyments afforded by the exchangeable products of his skill and labor. The economist does not regard other subjects as inferior, but only as subjects which must be pursued, in part at least, by other methods, so that his science can come in only as an auxiliary. The reasons for all this will be clearly seen by comparing it with some kindred branches of inquiry.

The general subject of human desires in their relation to sociology naturally divides itself into three branches. The first includes the laws to which these desires are themselves subject, the causes of their inception, growth, and decay. This is a part of what Mr. Mill proposed to term "Ethology,"* or the science of the formation of character. Character being already made for man, and its formation or change lying without the sphere of his direct volition, this science cannot be treated by the method of political economy, which considers only results of volition, and indeed only such results as admit of being foreseen and determined. In the latter, man as he is,

* System of Logic, Book VI.

with all his desires, is supposed to be given as an element of the problem.

The domain of moral science is that on which political economy is most persistently urged to encroach. When the moralist is told that economy does not criticise human desires, but places all on the same level, and recognizes no other good than their gratification, he is apt to conclude that it is in some way opposed to moral philosophy. To him it is obvious that there is a higher good than the mere gratification of the natural and acquired tendencies of humanity ; and he analyzes and criticises the various appetites and emotions to which humanity is subject, and shows their relation to that higher good. But the limitations of economy do not imply any antagonism to the conclusions of the moralist. The economist does not claim that his good is superior to, and should take the place of, that of the moralist ; in fact, he can hardly be said to have a good, in the sense in which the word is used by the other. His method is fitted only to determine the results to which the acts of men lead, and the restrictions to which they are subject ; and the attempt to apply it to questions of morals would result in failure.

The questions whether certain methods of proceeding are or are not those best fitted for the attainment of any desired end, and whether that end is itself a good one, are so obviously distinct, that it would be superfluous to insist upon their separate treatment, if we did not find them so constantly confused by popular writers. It is only by keeping within its proper sphere that economy can efficiently help morals. Our judgment of the good or bad tendencies of an action ought to largely depend on the ultimate effects of the action, and these can be learned only by processes to which moral philosophy is a stranger.

It is well known to economists that, while the judgment of individual men respecting the best course to promote their immediate personal interest is generally the best that can be formed, this is far from being the case when they attempt to judge of the interest of society. This is seen most strongly in the case of charity, — a field in which the views of the moralist and those of the economist oftenest clash. Under the limitations we have laid down, the province of economy

is only to say whether the object of a philanthropist is really attained by the course which he pursues, not whether it is a good or a bad object. If his object in giving alms to a mendicant is simply to increase the income of that particular mendicant, without regard to the rest of society, or to rid himself of his importunity, then he does wisely. But the motives sanctioned by morals would not be these, but the general good of humanity. If this be the motive of the philanthropist, the economist will show him that he is making an unwise application of his money in giving it to a mendicant. He is simply hiring an idle man to remain idle, by giving him bread taken from the mouth of the honest laborer. In the large majority of cases, at least in this country, the mendicant has become such for the same reason that the bricklayer has,—because he has learned from the experience of others that he can thereby make a living. The sum total of wealth given by society to mendicants represents a certain proportion of the products of labor which is set apart as a reward for those who may follow the profession of mendicancy. This result is one which, from his own point of view, it is the duty of the moralist to take into consideration.

The clear definition of the distinction between the abstract science of political economy and those of its applications which we nearly always meet with in works on the subject, is also of prime importance. Very few indeed are the writers on this subject who are content to treat it as an abstract science, without any reference to its bearings on questions of public policy; and it is largely to the want of such cultivators that the unsettled condition of its fundamental principles is due. No real progress is ever made in physical science except by men who aim at nothing beyond the discovery of general truth, regardless of its bearing on human affairs; and it is not unreasonable to expect that no important advance will be made in political economy till it is studied in the same way. Unfortunately, there are obstacles in the way of the development and application of its principles in the manner in which those of physical science are developed and applied. In the first place, it would seem that the abstract science of wealth is lacking in that interest which attaches to the study of nature.

The writers on it are very few indeed, and have remained almost entirely unknown, even to each other. Their readers must be at the same time mathematicians and economists,—a combined class so small that it could hardly make itself heard, even by the scientific world. In the next place, the subject-matter to which the pure science is to be applied is one in which conflicting interests are so involved, that the prospect of disinterested investigators being allowed to settle them does not seem encouraging. When an academy of scientific experts shall be called on by Congress to investigate the effect of a proposed tariff upon the industry of the country, an extraordinary advance will have been made in our intellectual status.

In no science whatever does the boundary line between the pure science and its applications admit of being laid down with entire precision. Any application to purely hypothetical cases, framed for the purpose of illustration, may, in a certain sense, be regarded as an extension of the pure science. But we can have no difficulty in deciding that an application to an actually existing case for practical guidance lies without the domain of the pure science, as does also the application to all problems, real or hypothetical, the solution of which demands that we adduce other principles than those of the science in question. Viewed from this stand-point, the larger part of the existing treatises on political economy are occupied with the applications of that science to the very complex conditions of the affairs of men.

Among these applications the discussions of questions of governmental policy occupy the foremost place. Indeed, it is not unfrequent to find writers attacking these questions with such ardor as to forget that there is any science behind them. That free-trade is a fundamental principle of political economy is a proposition often heard from men of the highest intelligence; while writers of another school suppose themselves to be discussing that science when they are seeking to prove that free-trade should not be allowed. Accordingly, the policy of a protective tariff is nearly always discussed in connection with the laws of foreign trade. Now, it is quite true that no one can form a really intelligent and weighty opinion on the subject of protection without a clear under-

standing of the elementary principles of our science in all their ramifications. But it is no more necessary that he should understand the laws of foreign trade than those of any other department of the science, since the arguments for and against the policy in question are not generally founded on any peculiarities of trade, but on quite elementary principles. The argument against considering the laws of foreign trade and the policy of protection together is the same that holds against the combinations of heterogeneous forms of thought in other discussions, namely, the confusion of ideas into which the reader is thus liable to be led. The inquiry into the manner and degree in which various causes affect the phenomena of foreign trade, that is, the quantities of each kind of goods imported and the prices at which they are sold, is one of interest and importance, without which the science of economy would not be complete. Moreover, among these causes tariffs and other regulations of government are just as legitimate objects of investigation as any others. But, when the economist has completely traced the action of each cause to its ultimate effect upon both foreign trade and domestic production, the scientific part of his task is done.

Considerations of a similar character apply to questions connected with money. The origin of banks, the functions they fulfil in exchange, and the various effects of an inflated and irredeemable currency on economical phenomena, are all legitimate questions of economy. A complete understanding of the mode of action of all the causes which come into play through the peculiarities of the currency is essential to the construction, and even to the correct judgment, of any system of regulating the currency. When the economist has shown the statesman how all these causes act, whether they be natural or artificial, he has performed his duty as a scientific investigator. He may devise a complete system of regulating the banks of the country, but if he inserts this system into a work on economy as a part of the science, he is mixing two heterogeneous subjects, to the probable confusion of mind of his readers.

It is not merely in questions of public policy that we see the boundary lines of our science disregarded: There are a

multitude of social questions to which its principles may be applied with more or less success, and these are nearly always confounded with the science itself. The Malthusian theory of population is a case in point. Here the question is whether population does really so tend to increase that it must ultimately be pressed for the means of subsistence. Its solution depends on two factors : (1) the rate at which population tends to increase ; (2) the improvements in the means of providing subsistence for it. The first being a result of human volition, it might appear, at first sight, that, by the principles we have laid down, its consideration belongs to political economy. To see that this is not the case, we have only to reflect that, in the case of economy, the volition is directed toward a certain definite end; and is exercised in accordance with a law of greatest result which enables us to reduce its action among great masses of men to exact laws ; while those volitions which result in the increase of population are not subject to this law, and are not directed with any view to an exchange of services between different classes of men. The method of political economy is not, therefore, susceptible of application in this question. And if it cannot be applied to the increase of population, much less can it be applied to the question of further improvement in our means of procuring food. To what extent, by what means, and at what cost the productive power of land can be increased are very important social questions, and in the answers we should have very valuable data ; but they cannot be investigated by the methods of political economy. The data are of that class with which the economist must be supplied before he can apply his science.

We are at the present day witnesses to a widespread effort, at least among English-speaking people, to study the wide subject of sociology from a more purely scientific point of view than has hitherto been taken of it. This movement is probably due to the influence of Herbert Spencer more than to any other one cause. It is one from which great good may be expected, especially if social reformers can be in any way influenced by it. But if it invades the peculiar and limited field of political economy, nothing but harm will result. That it may seek to do so to a greater or less extent will

appear highly probable, if we reflect how fascinating to a large portion of the intellectual world must be the idea of helping the economists out of their perplexities by an infusion of new ideas, and by the application of the same methods which have yielded such brilliant results in the physical sciences. To show that no other method than that already described can be successfully applied to purely economic questions has been one of the principal objects of the present article.

It is with no disposition to undervalue general sociology that we express the hope that it will not supersede any part of the old-fashioned political economy in the curricula of our colleges. Even combining the two will be subject to the danger of leading the student into forgetfulness of the different methods which must be applied to them, and losing sight of any clearly marked line between what is to be regarded as scientific certainty and what is not. In consequence, he will fail to form a clear and definite idea of the manner in which public questions pertaining to revenue, to foreign trade, to domestic industry, and to the currency are to be approached. These are questions on which every influential citizen should be able to form an intelligent opinion ; and he can no more do so without a clear conception of the peculiar mode of action of causes in the industrial world, than he can understand the workings of an engine without a knowledge of mechanical principles.

SIMON NEWCOMB.

ART. II.—GEOGRAPHICAL AND GEOLOGICAL SURVEYS.

II. GEOLOGICAL.

IN a previous article we have discussed the subject of Geographical Surveys, and now turn to those which are known by the term "Geological." Our object, at present, is, to explain why geological surveys have been instituted in different parts of the world, and by all, or nearly all, civilized states ; then to show, in a general way, what has been accomplished by them in other countries, and also, and more particularly, in our own.

We shall then be prepared to consider what is needed, in a State like Massachusetts, in the way of geographical and geological work, in order that the public interests may be best cared for, and the claim which our people generally make, that they have a right to take a high rank among civilized communities, be justified, in that which concerns a thorough knowledge of their territory and the development of its resources.

And, to arrive at a satisfactory result, it will be desirable, in the first place, not so much to explain what geology is, as to show what the economical bearings of the science are, and how it connects itself with the material welfare and progress of the State; and, with this object in view, the relations of different governments to the mining interest will be set forth, although necessarily in a very concise way, since a full development of the subject, demanding not less than a whole volume, would be quite out of place here. That geological surveys are in some way expected to be of great value to the community is evident from the fact that they have been extended over so large a portion of the most enlightened countries; and that important results have been attained may also be taken for granted, because these surveys are constantly gaining in extent and in the scope and magnitude of the work undertaken. And yet, in this country at least, it is very doubtful whether more than a small number of the people really have any just appreciation of the nature of the operations of a thorough geological survey, while it is certain that there are but few persons who have sufficient knowledge of the subject and confidence in the value of the work done to be able to use it as it ought to be used, in order that a full return for the outlay incurred may be obtained.

All know, more or less definitely, something of what the science of geology is; and that while the geographer has to do with the surface of the earth, the geologist has not only to look at the surface, but also to endeavor to ascertain what is beneath it. Geography is one of the plainest and most straightforward of sciences. The mapping of the earth's surface, or the exhibiting on paper of its physical features, and the delineation of its artificial subdivisions, are tasks of great ease and simplicity. Work it is, to be sure, which demands

time and patience, and which requires the expenditure of a great deal of money, where accuracy is desired: but there is nothing of theory or hypothesis about it. When, however, we enter the domain of physical geography, or that more general form of the subject which has for its object the investigation of the laws governing the system of physical movements which take place upon the surface of the earth, we find ourselves in presence of a much more difficult task. The majestic sweep of the oceanic currents, the disturbances of the atmospheric equilibrium, the theory of the tides,—these and kindred subjects demand, not only prolonged and accurate observations, but the aid of the highest mathematical analysis; and we may feel assured that many years will elapse before all the problems presented to the investigator in this department will be solved. It is where physical geography ends that geology begins; and, as we go backward in time and endeavor to ascertain how the great dynamic agencies now moulding the earth's surface worked in the earlier epochs of its existence, we follow a road which is continually becoming blinder and more difficult.

Indeed, it has been, and often is, made a matter of reproach to geologists that their science is one in which hypotheses and theories predominate over facts; and it is especially urged against it, that it does not furnish numerical results—that its fancies are many and its figures few. This is, indeed, true, and yet geology has done more than any other science to correct the former erroneous ideas of men in regard to the length of time during which the earth itself, and man upon its surface, have been in existence. The results of geological investigation, although not capable of being put into figures, are as grand as any with which astronomy has furnished us; and that which the latter science has done to enlarge our conceptions of the extent of space cannot be considered as having had any more powerful influence on the intellectual development of mankind than have the revelations of geology in regard to the immensity of time required to allow for the occurrence of that complicated series of changes which the study of the earth's surface, and such of its interior as is accessible to us, has shown to have taken place. It is true

that the temptation to theorize and speculate, on a basis of small knowledge, may justly be charged against many who would consider that their claims to be called workers in geological science are beyond dispute. It is true also that for centuries geology consisted of little or nothing except speculations, many of which were wild and fanciful; but the last half-century has seen an immense change in this respect. Following the lead of the Geological Society of London, the really earnest workers in this line of research have accumulated a body of facts which it is already extremely difficult for any one man to handle. The Transactions and Proceedings of the various important societies exclusively devoted to geology form a library of no insignificant size; and the reports of the various official and government surveys fill a goodly length of shelving in one's library. Indeed, if geology has its imaginative and poetic side, it has another one of quite the opposite character. Let one examine, for instance, the bulky royal-octavo volume of the English Geological Survey, devoted chiefly to the details of sections of wells about London, and he will find that figures do there most abound. What can be more matter-of-fact than a sheet of coal-mine sections, in which, in a series of hundreds of alternations of beds of shales, grits, and coal, the thickness of each particular stratum is given with accuracy, as well as the minutest details of the peculiarities of its lithological structure! And these data, which are not obtained without much labor, but which look so unattractive to those not specially interested, may be of the greatest importance to persons mining or owning property in the region where the sections in question have been prepared, and they may be studied with the closest attention, and with results bearing directly on the welfare of the people, when placed in the proper hands.

The difference between geology and astronomy may be illustrated by comparison between the study of the phenomena of an eclipse and an earthquake, both of them events which in ancient times struck terror into the hearts of the multitude, although in the case of the eclipse the feeling could have been one of unreasoning apprehension only, while the earthquake was known to have been often highly destructive in its effects,

and therefore with reason to be dreaded. Now, the exact time of the occurrence of the next eclipse can be given with precision, because it depends on one simple law, always the same in its action, so that the motions and positions of the heavenly bodies can be ascertained by the aid of mathematical analysis for any future, as well as for any past epoch. The phenomena of the earthquake, on the other hand, depend on several causes which are not regularly recurrent in their action, and which in their mutual play acquire a degree of complexity which puts it quite out of our power to say at what particular epoch the tension of the crust will have reached such an amount, at any particular spot, that a seismic disturbance or earthquake will take place. After the shock has occurred, a great deal of important information can sometimes, if the conditions are favorable, be obtained as to the depth at which the shock originated, the way in which the vibration was propagated, and the manner in which its effects were made evident upon the surface. Looking at the matter from a general point of view, it can be shown what regions are most liable to severe disturbances, and the architect and engineer can be cautioned as to the necessity of planning their constructions so as to offer the greatest amount of resistance to the devastating agency. Thus interesting and important scientific as well as practical results are obtained, a portion of which are given approximately in figures; while by means of the combination of a great number of observations — which may perhaps have to be continued for centuries — we may at length arrive, not to that point where we shall be able to predict the time of the occurrence of earthquakes (which would, from some points of view, be a misfortune), but rather to a complete understanding of the causes of these terrible catastrophes, and of the best methods of providing against their effects.

It is chiefly through its intimate connection with the art of mining and the development of the mineral resources of the country, that geology has acquired the importance which it now has, and especially in its relation to the state. But little has ever been done by any government to encourage scientific research where there was not some pretty direct practical result to be attained. It is only within the most recent times

that the fostering of investigations made for the purpose of extending the boundaries of science, and not with an eye to any immediate practical application, has begun to be recognized as a duty. It is true, however, that in some branches of science — notably in astronomy — governments have been led to do a great deal for abstract science and to pay liberally for work which could, at present at least, only be seen to be very remotely connected with the material progress of the people. But this has only been by fits and starts, just as the right string in the popular mind happened to have been struck, or when the sentiment of international rivalry had been called into play. Thus England, after many years of the most profound indifference to Arctic discovery, suddenly awoke to the idea that this line of inquiry was of the greatest importance : the brilliancy of the achievements of the Germans and the Americans could not but be admitted, and must be surpassed. Thus, too, in the observations of the recent transit of Venus, where it would be difficult to demonstrate that the results would have any other than an exceedingly remote practical value, all the European nations vied with each other as to which should send forth the most thoroughly equipped band of observers. It was generally admitted everywhere that this was the proper thing to do. But when Gilliss went to South America and established an observatory for the purpose of determining the distance of the sun by observations on Mars, hardly an observatory could be found in the world willing to go a little out of its regular routine for the purpose of making the necessary corresponding observations ; and not a government lifted its finger in help, even when the expense incurred would have been absolutely insignificant, as compared with that of the late Venus expeditions. Again, that the patronage bestowed by governments on scientific research is fitful in the extreme may be illustrated by the indifference of the Ministry and the people in England to the deep boring now going on for the purpose of settling some points in geology bearing, not so very remotely, on questions of the highest commercial importance to the country. There is, in this case, not that immediate brilliant result to be attained which happens to fall in with the dominant fancies of the people ; in short, that kind of thing is not exactly in fashion at the present moment.

In the matter of the encouragement of science through the means of geological surveys the governments of Europe have, almost without exception, shown themselves far-sighted and liberal in their expenditures ; but it is the practical which has been aimed at, and the scientific results have been had, into the bargain, without having been at all looked forward to as a part of the *quid pro quo*. Indeed, the way in which geological surveys have come into being in Europe is something not at all a simple matter as it is with us ; but they have resulted, in most cases more or less indirectly, from the connection of the governments with the mining interests,— a connection which dates back to before the time when geological science had any existence.

If the phenomena of coal deposits, as well as of iron to some extent, are comparatively very simple and only require care and accuracy for their setting forth, so that capital may have a solid basis of fact on which to rest, this is far from being the case with most of the occurrences of the metalliferous ores. Metal mining is proverbially uncertain, and in proportion as it is uncertain, so it is attractive. Nature has stored away in the bowels of the earth many great prizes and a prodigious number of blanks ; and human nature is such that there are few things about which it is accustomed to get more excited than in regard to occurrences of metalliferous indications, especially those of the metals styled precious. No one who has not had practical experience of these matters can realize how much energy and time have been used up in foolish mining enterprises, especially on the western side of our continent, and how much fraud and rascality have been mixed up with the development of our metallic wealth. It is safe to say that, for years, half the resources of the State of California were wasted in profitless and foolish “prospecting,” or preliminary attempts at mining ; and it is a well-known fact that several times in its earlier history that State was completely demoralized by the “rush”*—thus wild and senseless migrations of bodies of miners from one mining region to another are termed — of

* See “Mining in the Pacific States of North America,” by J. S. Hittell, San Francisco, 1861, p. 29, *et seq.*, for a description of the Frazer River “rush” in 1858, as a specimen.

a large portion of its male population to some new El Dorado, where many of them left their starved bodies, while the rest came back in poverty and rags.

It is partly owing to this peculiar tendency of men to wasteful and heedless squandering of time and money where mining matters are concerned that the civilized European governments have, from time immemorial, taken this department of industry under their special charge. But there is another important element to be taken into consideration in this connection : this is, the sovereign right of the state to the metallic treasures buried beneath the surface.

At the present time, the object of governments in interfering with mining matters is chiefly to prevent foolish and extravagant expenditures and a wasting of the resources of the country ; the idea of the divine right of the sovereign to the metals — precious or base — found beneath the surface has, to all intents and purposes, been abandoned by the enlightened states of Europe. But this has not been brought about without hundreds of years of struggles and contest, in which popes, emperors, princes, and the people have all played their parts. In this country no such complications have ever arisen. The individual States have never attempted to exercise any sovereign right over the treasures buried beneath the surface as distinct from the soil itself. The general government, as the actual owner of the soil over a large part of the country, as already shown, has had full control of all that exists upon or beneath it ; and whenever Congress has done anything in reference to the sale of the mineral lands of the country, it has been because the United States was the exclusive owner of the ground, and not because there was any question of exercising the rights formerly claimed by sovereigns over the minerals and ores discovered within their territories. To undertake to show how and by what complicated series of steps the different states of Europe have been brought to their present stand-point in regard to mining matters would occupy far too much space in this connection. It need only be stated, in a few words, that it has been brought about because governments have become more enlightened, and because sounder ideas of political economy are now prevailing. It is seen to be for the best interest

of the state that mining should be as little hampered as possible ; that people who are willing to risk their capital in this way should be encouraged under wise restrictions to go on ; that the owners of the soil should not have it in their power to obstruct others who are willing to incur the risks which they themselves decline. And yet it is fully recognized that men must be guided by the light of science in their expenditures, and be restrained, as far as possible, from wasting their own money, and more especially from wantonly destroying the wealth existing beneath the surface. For every mineral deposit is of limited extent, and it is the state's interest that no more than is necessary should be lost in the working. A mine may be so unskilfully handled as to make it necessary that it should be abandoned long before it is exhausted, thus, to all intents and purposes, annihilating, so far as the public use is concerned, a portion of its contents ; or the ores taken from it may be wastefully treated in the processes of dressing and smelting which they have to undergo in order to obtain the metal from them. Here is a source of immense waste, against which it is the duty of the state to guard. For the metallic wealth included within the bosom of old mother Earth is not like the riches which her surface so bountifully provides. Forests will in time spring up again to replace those which have been recklessly removed. Exhausted soils may be made to recover their fertility ; but the contents of a mineral vein or deposit are there once for all, and if wasted in their removal the loss can never be repaired.

To understand something of the present position of the principal European states with reference to mining and geological work, it will be well to examine into what France, Germany, and England are doing in the way of encouraging and protecting the development of their mineral resources, by wise laws regulating the working of mines, facilities afforded for the highest instruction in this department, and minutely accurate surveys of their territories. And we may begin with France, a country where there are few important mineral deposits, except those of coal and iron ; while these are usually of such a character as to make their working difficult and expensive, so that the help of scientific control has been of great value, partly in checking foolish expenditures and partly by directing work

in progress, so that the best results might be attained, and the element of uncertainty eliminated, so far as this was possible.

In France, the Corps des Mines was established in 1781 ; and, about the same time, the Ecole des Mines. This mining school was first an elementary one ; it afterwards underwent several modifications, and finally became an institution into which a small number of the graduates of the École Polytechnique and those standing highest could be admitted as "élèves ingénieurs," and a few more as "élèves externes," on passing the necessary examinations. The "élèves ingénieurs" are, to all intents and purposes, government officers ; but they can only be promoted to the rank of "ingénieur des mines," and be charged with the duties of that position, after passing through the course of the Ecole des Mines.

The Polytechnic School is a government institution, the object of which is to give students an opportunity of receiving a thorough mathematical training, as preparatory to admission to various branches of the public service, and especially such as call for this kind of preparation for their successful pursuit. These branches are the artillery, the engineer corps, the hydrographical corps, the mining corps, the corps of roads and bridges, the general staff, the telegraphic service, the manufacture of powder, and the management of the government monopoly of tobacco. The course of the Polytechnic School lasts two years ; and the pupils, on finishing it, designate the branch of the public service to which they wish to be admitted, and are appointed, as vacancies occur, in the order of the rank with which they are graduated after the final examinations have been passed. From an inspection of the records for some years back, it would appear that the students who stand highest are inclined, in a considerable majority of cases, to select the mining corps in preference to any other department of the service. The instruction in the Polytechnic School is not exclusively mathematical, although this class of studies largely predominates. Physics, chemistry, German, and drawing are among the other subjects taught. The "élèves ingénieurs," after two or three years at the Ecole des Mines, on passing the required examinations, become "ingénieurs des mines," and are immediately employed in the government service, the nature

of their work being exceedingly varied and important, since they have to represent and advise the government in all matters connected with the concession and working of mines and quarries, as well as the building and management of railroads and steam motive-power in general. The scientific investigations of the "ingénieurs des mines" are given to the world in a periodical forming two thick octavo volumes a year, and published continuously since 1794, first as the "Journal des Mines," and, since 1816, as the "Annales des Mines," the whole forming a series of volumes replete with valuable information relating to mines and railroads, not only in France but throughout the world. The mining statistics are published in a separate work of quarto size, issued once every six or seven years. In these volumes the most minute details of the yield of all the mines in France are given, with a great deal of additional information in regard to the commercial aspects of the mining and mineral interests. For instance, a diagram map is issued, on which, at a glance, can be seen exactly whence each district derives its supply of coal; or, if obtained from more than one source, then the proportionate amount from each region of supply is indicated, so that the facts can be clearly and easily made out by simple inspection.

Under the French law, all excavations for metallic ores, mineral substances, or building materials are divided into three classes, — *mines*, *minières*, and *carrières*, or mines proper, mineral deposits worked by surface excavations, or such as are open to the daylight, and quarries. No mine can be opened or worked without a government concession, and then only under the strictest supervision on the part of the proper authorities. The proprietor of the surface can open and work a quarry on his own land, without any special interference on the part of the state, except so far as may be necessary to secure the safety and health of his workmen and his neighbors. A surface deposit, worked in a *minière*, may be opened and utilized by the proprietor of the soil, if he sees fit to do so; and, if not, he cannot prevent other properly qualified persons from occupying the premises for that purpose, security being given for the payment of such damages as may accrue. A *mine*, that is, a deposit of ore which has to be worked by under-

ground excavations, cannot be utilized, even by the owner of the soil, without a concession from the government; so that, for all practical intents and purposes, the ownership of ores lying deep beneath the surface is entirely separated from the ownership of the surface itself.

Thus we see that the French government has entire control of the mining interests; that it supports a School of Mining, and takes great pains to have the men who go to it educated in the most thorough manner, giving them a five-years' course, selecting them by competitive examination at the beginning, and only allowing them to pass from the general to the special school of science on proof of extraordinary diligence in their studies. We see, also, that careful record is kept of everything that is done towards the development of the mining interests, both from a scientific and a commercial point of view; that the statistics of mining are published in full, as well as a great deal of scientific material connected with the exploration and working of the metalliferous ores and of all other economically valuable substances obtained by quarrying or mining.

One of the duties of the French Mining Engineers has been, from the time of the institution of the corps, the examination of the geological structure of the country, with a view to the development of its mineral resources. The first attempt at what would now be designated as a geological survey was in 1811. At that time, Brochant de Villiers, professor of geology in the Ecole des Mines, presented to the government a plan for making a geological map of the French Empire; but, in the troublous times which followed, the work came to naught. In 1822, the subject was taken up again, the immediate incitement thereto being the publication of Greenough's Geological Map of England; and, in 1825, the work was commenced, the gentlemen intrusted with it, all professors in the mining school, having been allowed a year for travelling in England and preparing themselves by the study of the geology of that country. The result of this survey was a map, with accompanying text, published in 1840, after more than ten years of labor. It was on a scale of 1:500,000, in six sheets, which, when put together, made a square of a little over six feet; it was by far the finest

work of the kind which had, up to that time, been executed. In 1868, the importance of maps on a large scale, on which details could be given, having become fully recognized, the work was taken up again, and this time on a scale of 1 : 80,000. One of the peculiar features of the new map is this : that the explanatory text is so prepared that it can be attached to the different sheets as they are issued, either laterally or else by pasting on the back when the sheet is mounted on cloth. Thus map and illustrative text will always be together and ready for use. No less than 1,113 different symbols are used on this map for the purpose of designating every variety of mineral occurrence which can possibly be of economical importance ; these symbols are used in addition to the usual geological colors, by which the range and extent of the different groups of strata, under their scientific names, are given. There are also sheets of vertical and horizontal sections, on various scales, to suit the nature of the locality, as well as photographic views.

The course of the Prussian government in reference to mining matters, although differing in some details, is, on the whole, very similar to that of France. The new Prussian mining law dates back to 1866 only ; previous to that, the government had for centuries been working itself from darkness towards light, as knowledge became more generally diffused and correcter ideas of political economy began to prevail. Mining is of very ancient origin in Germany, and a large number of our own mining terms have come to us from that country through Cornwall. And there was, for hundreds of years, a triangular contest going on there between the sovereigns, the princes, and the people in regard to the rights and privileges of the miner. Many things were done in those early days which would seem strange to us if we had not our own Congress to look to for a parallel. For instance, we find at one time that it was forbidden to increase the number of coal-mines, lest the expense of so many deep workings should raise the price of the combustible ! However, it will not be possible to go back to the past and trace the progress of more liberal ideas finally culminating in the present law, which places things on an entirely satisfactory basis. As in France, property in the minerals is distinct from property in the soil. The state makes no claim except

to regulate, and receives only a very small proportion of the produce of the mine as a return for the necessary expenses of oversight. Any one can "prospect," or obtain a concession to work a mine, on any one's land, by taking proper steps and paying for the damages. The government, as in France, has a Mining Corps, a school where men are trained to the profession, and takes care that nothing shall be done which shall tend to cripple or waste the resources of the country. A quarterly journal is published, with a folio atlas of plates, in which the statistics of all the mines in the empire are given with accuracy and in the greatest detail, and all important improvements in mining and smelting discussed. This publication, as a whole, stands at the head of what is now doing in this line, the French "*Annales des Mines*" having decidedly fallen off in value within the past few years. A great part of the Prussian territory has, from time to time, been geologically mapped, under authority of the government, and a bureau of geological surveys, the "*Landesanstalt*," is now fully organized, and the publication of a series of maps on a scale of 1 : 25,000 has been commenced. An immense impetus has been given to the mineral industry of Prussia by borings and other explorations made under the directions of the state, and which have resulted in important discoveries leading to the establishment of entirely new branches of manufacture, based on the occurrence of economically valuable mineral substances existing in immense quantities, but which lie far beneath the surface, and would never have been discovered had it not been for the costly underground researches made in accordance with the indications furnished by a study of the geological structure of the country. In no country has the economical value of this kind of scientific work been more clearly demonstrated than in Prussia; and it may be mentioned in this connection, that it is there that the earth has been penetrated by boring to the greatest depths yet reached by man, namely, a little over 4,800 feet.

In Great Britain the relations of the government to the mining interest are much less direct than on the Continent, and are, in the main, limited to police regulations, having for their object the safety of the men employed and the limitation of the hours of labor for women and children. England and Scotland are

countries, however, where mining is a business of immense importance, as will be easily understood when it is mentioned that the make of iron amounts to 7,000,000 tons, and the product of coal to 125,000,000 tons per annum. And in the mining and smelting of the ores of lead, copper, zinc, and tin, England has a vast amount of capital employed. And as Great Britain stands first and foremost of all countries in the magnitude of her metallic and mineral developments, so the government has, especially within the past quarter of a century, been very active in promoting a scientific investigation of these interests, and in putting them on a substantial basis of accurate knowledge.

The geological survey of the United Kingdom began, in connection with the ordnance survey, by the employment of De la Beche to make an investigation of the important mining district of Cornwall and Devon. This was in 1835, and his report was published four years later. Soon the value of the work became apparent, and a separate organization was determined on for the geological survey, which has ever since been carried on with activity. The collections of the survey increased rapidly in importance and interest, and in 1851 the magnificent building in Jermyn Street, in which these collections were deposited, was opened to the public. Here, too, a mining school was established on a liberal scale, so that the Survey, the Museum of Practical Geology, and the Mining School are all parts of one harmonious whole. The work of the survey is carried on at the same time in England, Scotland, and Ireland by corps in a measure independent of each other, but all under one director-general in London. The publications are already very numerous, comprising geological maps, sections, and printed volumes, all made with the most scrupulous accuracy, and on a very large scale. The ordinary sheets are on the one-inch scale; the coal-fields are laid down on the scale of six inches to a mile. While the cost of an entire set of the publications of the survey is necessarily very large, any one may have a geological map of a region in which he may be specially interested, and the necessary descriptive and illustrative text, for a few shillings. The statistics of the produce of all the mines, as well as detailed plans of the same, are kept at the Mining Record Office, and a full abstract of them published every year.

When we turn to inquire what has been done and is now doing in our own country in the way of developing our mining interests, by geological surveys, mining schools, and the like, we have, in the first place, to distinguish between State and United States authority ; and we will first notice the relations of our general government to mines, mineral lands, and mining education and development.

The United States being now, or having been, as has already been set forth in the first part of this article, the owner of most of the territory outside of the older States, that is, of nine tenths of the whole country, has had, of course, the right to control the mining interests, and either to sell or lease any portion of its territory ; although that the government has had the power, was perhaps not quite so clear. The first action of Congress seems to have been in 1807, when the government lead-bearing lands in the Mississippi Valley were ordered to be reserved from sale, and the granting of leases was authorized. None, however, were actually issued until 1822 ; and but a small quantity of lead was raised previous to 1826, from which time the production of this metal began to increase rapidly. For a few years the rents demanded by the government were collected with tolerable regularity ; but soon large amounts of mineral land began to be fraudulently taken up as agricultural ; and, the miners refusing to make any further payments of rent, the government was quite unable to force them to do so. It was therefore, in 1847, found necessary to do away with the leasing, and to allow the lead-bearing lands to be sold, since they had been a source of constant embarrassment and of no profit while the leasing system was in force. Exactly the same thing was done in the Lake Superior country, after the lands lying to the south of that lake had been ceded by the Chippeways. The copper-bearing ranges, and a great deal of barren country besides, were covered with leases obtained from the War Department, each of which included at first tracts of nine square miles, and afterwards of one. This issue of leases, however, was suspended in 1846, as being illegal ; and in 1847 Congress passed an Act authorizing the sale of the lands, regardless of whether mineral or not ; and a geological survey was authorized at the same time, for the purpose of designating

what tracts should be sold as mineral land, the price of this being fixed at double that of the agricultural.

A problem of much greater magnitude came up for solution when it was discovered that a large portion of the remote and, as it was supposed, desolate region west of the Rocky Mountains contained more or less of the precious, as well as of other, metals; while over an area of considerable extent the amount of gold to be had by means of entirely unskilled labor was quite unprecedentedly large. A commissioner was sent to California to report on the matter,—a politician, of course,—and he enlightened the world with curious theories as to the origin of the gold in the detritus, but could afford little help to the government in reference to the way in which a small percentage of the gold which was being carried off from the public lands at the rate of sixty or seventy millions a year should find its way into the treasury of the country. It was quite plain, however, to most persons, that nothing could be done, except to wait until conditions changed, or the gold was all carried off. The miners were a too powerful body to be interfered with; and if an army had been sent to California to coerce them into paying, the soldiers would themselves have turned miners, thus only increasing the difficulty. The let-alone policy was therefore strictly adhered to, and for nearly twenty years after the first discovery of the gold by the Americans nothing whatever was done either toward selling or leasing the auriferous tracts, or regulating the ways and doings of the miners thereon. The diggers, of all nations, occupied the land as if it were their own. They made such rules and regulations as suited themselves,—a new set for each new district; and when they disagreed they fought it out, with a good deal of help from the lawyers, and occasional appeal to the revolver or the Henry rifle as the least expensive and most satisfactory way of getting judgment. When, however, the placer diggings began to be pretty much exhausted, portions of the river-beds having been worked over as much, in some instances, as a dozen times, and at each time with diminishing profit; when quartz and hydraulic mining, requiring perseverance and a good deal of skilfully invested capital, came to be the chief methods of mining; and, especially, when it began to

be found desirable to dispose of mines of doubtful value to foreign capitalists ; — then it gradually became apparent to mining men that it would be convenient to have a title, and that a position from which one could not be ousted by force, nor by the changing whims of a new body of occupants of the adjacent soil, might be a desirable thing, even if a small sum had to be paid to the United States in return for these advantages. Thus, at last, after years of discussion, pro and con, and when the discovery of the silver-bearing veins of Nevada had quite thrown the gold of California into the shade, making permanency of occupation of the highest importance, Congress took up the matter of the sale of the public mineral lands in the Pacific States ; and, in 1866, almost twenty years after the first discovery of gold in California and the consequent rush of emigration thither, an Act was passed entitled "An Act granting the right of way to ditch and canal owners over the public lands, and for other purposes," the "other purposes" being much the most important ones, and including, among other things, provisions for the sale of the mineral lands. This Act was somewhat amended in 1870 ; and, in 1872, another one was passed, entitled "An Act to promote the development of the mining resources of the United States," modifying and repealing a part of former laws on this subject, and leaving the matter nearly in this form : "All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed," are declared to be free and open to exploration and purchase by citizens of the United States and those who have declared their intention to become such, "under regulations prescribed by law, and according to the local customs or rules of miners, in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States." Mining claims, "upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits heretofore located," shall be governed as to length along the vein or lode "by the customs, regulations, and laws in force at the date of their location." But any claim made after the passage of this Act must not exceed 1,500 feet in length on the lode, or 300 feet in width, neither shall it be less than 25 feet in width on each side of

the middle of the vein. All persons already holding claims are confirmed in possession of them ; but their sides are limited by vertical planes ; that is, the idea of "square claims" is maintained, and not the old Spanish custom of regulating the inclinations of the sides of the location to correspond with the dip of the lode. This is a most beneficial provision, and its enforcement by law years ago would have saved millions squandered in litigation ; the "honest miner" having been very much inclined, if he had lost his vein, to endeavor to get hold of another, under the pretence that it was one of the "spurs, dips, or angles" of his own,—to use the jargon in which the notices of mining claims have always been written, excepting in the very few districts where "square claims" have been adopted by the miners. Provision is also made for enabling any miner to purchase and procure a patent for his claim, on paying for its survey, and at the rate of five dollars an acre for the land. In case of adverse claimants to the same piece of ground, the question of right has to be settled "by a court of competent jurisdiction." The miner, however, need not purchase, unless he sees fit to do so. The United States will not in any case molest him in his occupancy of the ground. This is not the place to go into any discussion of the crudities of the law in question, which bears all the marks of having been drawn up by lawyers with an eye to their own business, rather than to the good of the miner or of the country in general : certainly no competent mining-engineers could have been consulted in its preparation. By a subsequent Act, passed in 1873, "vacant coal-lands" are allowed to be entered at the price of ten dollars per acre, "if more than fifteen miles from a railroad, and twenty dollars if within that distance." The amount which may be so entered is limited to 160 acres for each person applying, or 320 in case of an "association of persons." Those actually in possession of coal-mines which they have opened and worked have the preference in making the entry, and may purchase an amount of land not exceeding 640 acres, provided as much as \$5,000 has been expended on the development of the property.

In regard to the collection of mining statistics, something has been attempted to be done by the government, but with

little success, since there are no laws requiring owners of mines to keep any record of their operations, or to furnish such, if kept, to a government official. The census mining returns, gathered every ten years, have sometimes been amusing from their absurdities, never of any value as statistics, except perhaps in the case of the census of 1870, with reference to the production of coal and iron.* To illustrate the utter worthlessness of our government mining statistics still further, it may be added that the "commissioner of mining statistics" reported, as the gold and silver product of the year 1870, the sum of \$61,500,000; the census returns of the same year give as the value of the "gold and silver mining product," \$26,452,652. Everybody posted in mining statistics knows that they are of little or no value, unless the sources from which they are obtained are under constant and efficient control by men of honesty and intelligence. In this country estimates of the amounts of the metals produced are simply guesses, which are valuable in proportion as the guesser has skill in weighing against each other and combining a great many facts bearing indirectly on the problem to be solved.

The establishment of a national mining school, under the control of some one of the departments at Washington, has been repeatedly advocated, and bills have been introduced in Congress with that end in view. As our government does not attempt in any way to interfere with or control the mining interest, it is difficult to see why a mining school should be supported by the nation, any more than a school of law or dentistry. The graduates of such a school would stand no more chance of employment than would those of any other institution. It is extremely desirable that our mines should be worked with skill and economy; but the establishment of a national mining school would not have the slightest effect in

* The superintendent of the census of 1860 estimated the amount of iron produced in the United States at 98 pounds for each man, woman, and child. To arrive at this result he added the total production of manufactured iron to that of the crude pig from which the manufactured was almost exclusively produced,—a proceeding exactly similar to what it would be if, to ascertain the weight per head of bread consumed in any town, one were to add the weight of the flour sold to that of the bread produced in order to arrive at the total to be divided by the number of persons.

bringing about the wished-for result. It is very desirable that Congress should pass laws regulating the sale of the mineral lands in a manner consistent with the well-established principles of political economy, and that a sound knowledge of geology and mining should form the basis of those laws. But if the most accomplished and the most honest mining engineers in the country were to offer their gratuitous services to the authorities at Washington for the purpose of helping to draw up the necessary laws, they would simply be laughed at for their pains.

It must not be supposed, however, that because the general government has wretchedly mismanaged the mineral lands belonging to the public domain, that our mining resources have not been rapidly and extensively developed. Our produce of iron is enormous, second only to that of Great Britain: the increase in the amount of coal mined is rapid, and indicates the steady expansion of our manufacturing interests. The gold of California has been washed from the surface detritus with feverish haste; and now the silver-mines of Nevada are the scene of the most extensive mining operations the world has ever seen. Nature has been prodigal in her gifts to our people; and we have been and are, perhaps, not more wasteful of our mineral than of our agricultural resources. The future will show how haste has made waste; but there is not the slightest reason to expect any change at present. As the development of the great permanent mineral interests, those of coal and iron, is chiefly in the older States, where the general government has no claim to interfere, having no ownership in the land, we may expect to see the individual States, at no very distant period, making necessary and desirable regulations for the health and safety of the miners and the people living in the neighborhood of underground workings; and economy, the result of skilful management, will come into fashion when the country has been forced into it,—a process which, as some think, has already commenced. A thorough knowledge of the geological structure of the country will form a sound basis on which the economical development of its mineral resources may rest; and of what has been done in this direction by United States and State authority we may now proceed to furnish a sketch.

The first step in geological science in this country dates back as far as 1807, when William Maclure, quite unaided and alone, commenced the exploration of the structure of the Appalachian chain, and the region lying between that range and the Atlantic coast. This was before William Smith's Geological Map of England had been issued ; but this pioneer in the science had already, seventeen years before, given to the world his "Tabular View of the British Strata," in which, for the first time, any part of the series of fossiliferous rocks, which make up so large a portion of the visible crust of the earth, had been arranged in the order of their formation. The Geological Society of London had just been founded, and the science of geology had suddenly begun to exist, and to command attention among educated men throughout Europe. Unfortunately the rocks of which the order of superposition was first worked out in England were quite different in geological age from those which largely predominate on the Atlantic slope and in the Valley of the Mississippi. Had this been otherwise, had the Silurian and Devonian formations, which cover so large a part of our own territory, been equally important and well defined in England, the task set before the earlier explorers here would have been much simplified. As it was, they had to wait for thirty years before Sedgwick and Murchison solved the difficulties presented by the Palaeozoic system in Wales and on its borders, and gave our geologists the material for comparing their results with those which had been obtained elsewhere. It was no wonder then that Maclure found himself involved in a maze of difficulties : the work he had undertaken was far too comprehensive for any one man to accomplish. His geological map, however, did roughly indicate the character of the formations over an extensive area ; and, considering the circumstances, it may be said with truth that this first step was one which should be remembered as a worthy beginning of American geology. An "American Geological Society" was formed in 1818, under the leadership of Maclure, although its existence was but short-lived ; and the same was the case with the "Pennsylvania Geological Society," which was originated in 1832. The "Mineralogical Journal" of Dr. Bruce, also of

brief duration, and the "American Journal of Science," established by Professor Silliman in 1818, which has held out up to the present time, were indications of incipient activity in the direction of mineralogical and geological research. Amos Eaton was the first person in this country to make what we should now call a "geological survey," that is, a detailed examination of some special district, with a view to the elucidation of its geological structure and mineral resources. This survey was of the route of the Erie Canal; it was paid for by Stephen Van Rensselaer, and the results published in 1824. Here again the same difficulty presented itself which met Maclure; the rocks and fossils were unlike those best known in England, and the puzzle was so complicated that one man, in a short space of time, could do almost nothing towards its unravelling. There was but little accomplished except to call attention to some of the most prominent varieties of rocks, without any attempt to find out much about the fossils they contained, the science of palæontology being then indeed in its infancy. At the time when Eaton's work was done, the mining and smelting of iron ores had already become of very considerable importance, our yield of pig-metal reaching, in the year 1830, 165,000 tons; anthracite coal was beginning to come into general use, the Lehigh region supplying the market exclusively from 1820 to 1825, while the Schuylkill and Lackawana districts were opened between 1825 and 1830, when the quantity mined had risen to nearly half a million tons per annum. The smelting of lead was also just becoming a business of importance in the Mississippi Valley; but there was little else worthy of notice doing in the way of the development of our metalliferous resources. The discovery of gold in the surface detritus had, however, created a great excitement throughout the Atlantic States from Virginia south; and no doubt this was one of the principal causes of the sudden rise into prominence of geological and mineralogical studies in this country, and of the starting of a large number of State surveys just about this time.

A recognition of the science of geology by the general government seems to have been first made by the appointment of Mr. Featherstonhaugh, an Englishman, "to examine geologi-

cally the Territory of Arkansas and the adjacent public lands," which, at that time, in 1834, namely, might be taken to mean almost any part of the Mississippi Valley. This gentleman, who took the title of "United States Geologist," examined the country and published a geological section extending from the Atlantic Ocean, through Illinois and Missouri, to Texas; but his printed report contains hardly anything of value. All the limestones of the West were grouped by him in one formation, which he considered to be identical with the English carboniferous. His work was but little, if at all, in advance of that of Eaton, done ten years earlier, while the science had in that time made great advances, especially in England.

In 1839, Congress passed a resolution requesting the President to prepare "a plan for the sale of the public mineral lands," and also to cause surveys to be made for the purpose of getting information "relative to their location, value, productiveness, and occupancy." From the documents published the next year, it would appear that no other mineral lands were intended to be embraced in this inquiry than those of the Upper Mississippi Valley. The idea of mining any farther west than this was hardly dreamed of at that time. At least, it seems to have been expected that the work of exploration would be completed within three or four months, and Dr. D. D. Owen was appointed "principal agent" for that purpose. His report, made early in 1840, was limited to the lead region of Wisconsin, and contained the first approximate indication of the outlines of the geology of that State to the south of the river of the same name, and also of Northeastern Iowa. At this time considerable progress had been made in working out the geology of New York and Pennsylvania, and it was not difficult to take a long step in advance of Mr. Featherstonhaugh; so that the rocks of the region in question were correctly referred to the Silurian system, and the natural groups into which they were divided were indicated with considerable accuracy.

A few years later, namely in 1847, the subject of the disposition of the public mineral lands was again before Congress, and this time with reference to the copper region of Lake Superior, about which there was great excitement throughout the country from 1844 on for several years. On this occasion

two new geological surveys were ordered, one of the Upper Peninsula of Michigan,—the Lake Superior Land District,—the other of the Chippeway Land District, embracing an extensive area in Wisconsin, Minnesota, and Iowa. The results of both these surveys, accompanied by maps on which the tracts designated as mineral lands were indicated, were published in 1850—52, and were much more elaborate in their character than anything which had been previously done in this way by the general government. The geological formations were marked out and classified, over that extensive area, essentially in the way in which they now are, later surveys having made but few additions except of details. The great extent and value of the iron region of Lake Superior were then, for the first time, made known. These surveys did not, however, as has been shown already, lead to any general plan for the disposition or the care of the mineral lands. It was not until nearly twenty years later that this was attempted.

After the discovery of the gold of California, which happened just about the time that the Lake Superior speculations, or the "copper fever," as it was generally called, had subsided into comparative quietude, the attention of the government began to be more and more called in the direction of a West, a long distance farther off than what had been previously known as the "Far West." When the importance of the mining interests of California had been demonstrated,—and this needed but a brief space of time, the yield of gold rising almost immediately to figures entirely unparalleled in the world's history,—it might naturally have been expected that Congress would set on foot a careful reconnoissance of the region west of the Rocky Mountains, a region of a million of square miles nearly, absolutely unknown, so far as its geology and mineral resources were concerned, but which, judging from what had long been known of Mexico, of whose Cordilleras ours were evidently the continuation, might be expected to be pre-eminently the mining region of the country. Nothing of the kind was done. Our legislators seemed entirely unable to grapple with any of the problems presented in that exceptional region. Each of the Pacific Railroad surveying parties, as already mentioned, was accompanied by one or more persons whose duty it was to collect in all

departments of natural history, and to study the geological structure of the regions traversed. Owing to the inexperience of most of the observers, and the rapidity with which the vast area was explored, almost nothing was accomplished in the way of throwing light on the mineral resources of the country west of the Rocky Mountains. Hardly one of the important problems presented in the field of general geology was solved. What was done was almost exclusively along the Pacific coast, the Rocky Mountain ranges and the great interior basin between them and the Sierra Nevada having been quite neglected. Hence it was, that up to the time of the commencement of the California State survey, no evidence had been obtained with regard to the age of the auriferous rocks of the California gold region; neither had it been discovered that the rocks about San Francisco were of Cretaceous age; and the very existence of this member of the series was quite unsuspected, although it forms the main body of the Coast Ranges, from Monterey north, and also occurs in large isolated areas on the flanks of the Sierra. Moreover, there was nothing known of the geological position of the high gravels worked for gold by the hydraulic process; nor had anything been discovered in regard to the occurrence of the Alpine Trias over a vast area in Western Nevada, a group of rocks extending from Mexico to Alaska, and replete with that peculiar assemblage of organic forms which has attracted so much attention in Europe. Indeed, nothing had been made out about either the geological age or the structure of any part of the Great Basin beyond what the collections made by Fremont had revealed. And in the Rocky Mountains proper,—the eastern edge of the Cordilleras,—all was entirely a *terra incognita* so far as its structure and the nature of its fossiliferous groups were concerned.

Our knowledge of the geology of the "Great Northwest," as the vast region of the Upper Missouri at the base of the Rocky Mountains may be called, has been developed gradually, beginning with the days of Lewis and Clarke. These pioneer explorers brought back with them fossils enough to enable Morton to determine the existence of the Cretaceous series in that region, and twenty-five years later Prince Maximilian of Neuwied obtained additional evidence of the same fact; and

again, in 1839, Mr. Nicollet acquired some information with regard to the extent of the area over which these rocks were extended. The first knowledge of the wonderful Tertiary fauna of the region of the so-called "Bad Lands" — the Mauvaises Terres of White River — was obtained by means of a bone sent in 1847 from one of the posts of the St. Louis Fur Trading Company to Dr. H. C. Prout of that city. The region was explored, ten years later, by one of Dr. D. D. Owen's assistants, who was then engaged in the survey of the Chippeway Land District, as before noticed. The fossils thus obtained, and those afterwards brought from that region by Mr. Culbertson, and other collectors, were described by Dr. Leidy, and proved to be of the greatest interest.

In 1853 two gentlemen visited the Mauvaises Terres, whose names are identified with the progress of geology in the Northwest, namely, the indefatigable explorer, Dr. F. V. Hayden, and the eminent palaeontologist, Mr. F. B. Meek. This expedition, which was made at the expense of Professor James Hall, laid the foundation of our knowledge of the geological structure of that region ; and almost the whole of what we now know of the geology of the Rocky Mountains is based on the work carried on or superintended by Dr. Hayden, almost uninterruptedly since 1853, and during most of the time under the authority of the Department of War or of the Interior at Washington. Those who are acquainted with the progress of American geology will not need to have it stated that the value of Dr. Hayden's work has been greatly increased by the thoroughly trustworthy and conscientious manner in which his extensive collections of fossils have been worked up, not only, and chiefly, by Mr. Meek, but also by Messrs. Leidy and Lesquereux. Dr. Hayden accompanied the expeditions of General Warren and General Raynolds, to which allusion has already been made, and in which the region of the Upper Missouri and the Yellowstone was reconnoitred. These explorations were followed by the appropriation by Congress of a small unexpended balance, made originally for defraying the expenses of legislation in Nebraska, for the purposes of a geological survey of that Territory. Under that authority Dr. Hayden was appointed United States Geologist in 1867 ; and the appropriation was

renewed the next year, with directions that the survey should be extended into Wyoming, and, if time permitted, as far as the South Park in Colorado. The work thus begun became first the "United States Geological Survey of the Territories," and later, as already mentioned, the "Geographical and Geological Survey of the Territories." Under this organization, the geological corps being reinforced by a topographical one, the work has gained greatly in scope and value, the appropriation having been liberally increased in amount; so that, if the organization could be made a permanent one, and not be, as it is, absolutely dependent on the whim of each successive Congress, we should have reason to look forward to a most satisfactory working up of the topography and general geology of the Cordilleras. Some geological work has been done in connection with Major Powell's survey of the Colorado, and the Wheeler Survey, under the United States Engineer Bureau, to which allusion has already been made; but nothing of importance has yet been published by either corps, so that no judgment can be formed in regard to the method or value of the work. The remarks made in reference to the manner in which the Departments of War and the Interior are duplicating each other's topographical work applies equally to the geological. The last volume of Hayden's Survey — the Annual Report of the explorations of the year 1873 — shows a gratifying advance over the preceding ones, in respect to the real value and accuracy of the geological material it contains.

The geological results of the "Fortieth Parallel Survey," in charge of Mr. Clarence King, are not yet published; but it is understood that one or more volumes are well advanced towards completion, and that they will soon be issued. We confidently expect to find in them a very large amount of new material of great importance, as throwing light on the structure of an extensive area, which Mr. King, with the large means put at his disposal by Congress, and the aid of an excellent corps of assistants, has had a fine opportunity to work out in considerable detail. The volume of "Mining Industry," published three years ago, and chiefly devoted to the detailed description of the most important mineral vein in the world, — the Comstock lode, — is a superb piece of work, and far in

advance of anything previously done in this country in the same line, and we know of nothing published in Europe superior to it. And it should not be forgotten that the high character of the work done by the Fortieth Parallel Survey was the cause of a great advance in the methods and aims of the other surveys which have their headquarters at Washington. This was especially the case with regard to Dr. Hayden's work, with which Mr. King's chief topographer, Mr. Gardner, and some of his assistants, became connected, thus rendering it probable that some degree of uniformity would be maintained in the extension of the topographical surveys which from that time forward became an essential part of what was previously only the "United States Geological Survey of the Territories"; that is, a geological survey without any geographical basis.

Of the various geological surveys instituted during the past fifty years by the individual States, it will not be possible to speak in detail. But this can be said, in regard to them all, that they are only reconnoissances. There is not one which rises to the standard of the European surveys, or which is based on an accurate geographical map. Neither has any such survey been made as can be looked on as a finality, or which is so considered by the people. For instance, not one of the coal-bearing States has carried its survey to such an extent of accuracy as is necessary in order that the quantity of this all-important material existing within its borders may be known even approximately. In no State has the economical value of its metalliferous ores been satisfactorily worked out. Neither is there one in which the character and distribution of the soils and superficial detritus have been made a subject of careful study, as has been done in Holland and is now doing in Prussia. The reasons for this condition of things may be discussed after a brief sketch of the development of these surveys in the different States has been given.

As it is generally stated that North Carolina was the first of the States to conceive the idea of having its mineral resources investigated at the public expense, it may be well to state that the idea originated (in 1821) with a Connecticut schoolmaster, Denison Olmsted, who was then acting as Professor of Chemistry in the University at Chapel Hill; and it

may also be mentioned that the — not overpowering — sum demanded for the work, namely one hundred dollars, was never received from the State treasury; so that the credit, if there be any, must be fairly set down as belonging to Connecticut rather than to North Carolina. The report itself was as creditable a one as could have been expected under the circumstances. Considerable information was collected in regard to the occurrence and value of the ores, minerals, and rocks of the State. The Deep River coal-field and the sandstones accompanying it were described, and referred pretty nearly to their true place in the geological series.

Something similar was attempted about the same time in South Carolina, but the results were never published, except in the form of communications to the newspapers. The geologist employed, Lardner Vanuxem, a native of Philadelphia, was — so far as is known to the writer — the first American educated abroad to the profession of mining engineer; and his scientific training stood him in good stead, a few years later, when he took charge of one of the districts into which the State of New York was divided, for the purposes of a geological survey. At this time the number of persons in the United States who had received what we should now call a scientific education must have been exceedingly small. There was no institution in the country where anything more than the rudiments of chemistry, mineralogy, and geology was taught; and it appears that there were only two or three persons, among all the earlier State geologists, who had had the opportunity of pursuing these studies in Europe, so that the first business of most of them, on entering upon their respective fields of labor, must have been to teach themselves.

Massachusetts was, in point of fact, the first State to inaugurate a geological survey, the beginning of the topographical work already mentioned having been very soon followed by the appointment, as State Geologist, of Rev. Edward Hitchcock, a gentleman who had become known through various papers in the "American Journal of Science" relating to the geology of the Connecticut River Valley. This appointment was made in 1830, and the work went on, with some stoppages, for about ten years. What was at first intended as a final report was

published in 1833 ; but a re-examination of the State was then ordered, and the completed work was issued, in two quarto volumes, in 1841. This was followed by a long series of publications, issued by the various States, the volumes having succeeded each other rapidly, until now quite a library of them has accumulated. Between 1833 and 1836 nearly every one of the Eastern and Middle, and several of the Western, States commenced their geological surveys,—first Tennessee, then Maryland, followed by New Jersey, Virginia, Pennsylvania, Ohio, Michigan, Indiana, Kentucky, and several of the smaller States. In few of these cases did the work go on to what was, even then, considered a satisfactory completion ; in most instances it was stopped after one or more annual reports had been made. New Jersey was for a time satisfied with Professor H. D. Rogers's final report, published in 1840 ; but the work has, since then, been several times taken up, and now the geological survey seems to have become a fixed institution in the State. The present State Geologist, Professor G. H. Cook, has annually, every year since 1868, made a brief report on some special subject of economical importance to the people. The earlier surveys of Ohio, Kentucky, Indiana, Michigan, Virginia, and Tennessee, in fact of all the large States except New York and Pennsylvania, were abandoned, and before anything like a complete reconnaissance had been made. In all these States, however, with the exception of Virginia, the abandoned surveys have been taken up again, and in some cases there have been several renewals and stoppages of the work.

Of all the earlier State surveys, those of New York and Pennsylvania were the only ones which became of considerable importance, and really contributed in a marked degree to influence the development of geological science in this country. These surveys were both begun in 1836, that of Pennsylvania being strictly limited to geology ; while in New York several branches of natural history, as well as agriculture, were to be made the subjects of special reports. New York is a State of large area, rich agriculturally, and having great manufacturing resources. For her coal, however, she has to depend on her neighbors in the South and West, as she has, herself, no

workable deposits of that invaluable material. Mining is of very secondary importance in New York, as the only metalliferous ores which have been hitherto worked with profit are those of iron. The manufacture of salt from the brines obtained by boring in the central part of the State has, however, long been an important branch of industry. Hence the economical aspects of the geological survey were of secondary importance, and the particular interest attaching to the work was due to the fact that here the sequence of the geological formations, from the base of the Carboniferous down to the very bottom of the fossiliferous rocks, including the Devonian and the Upper and Lower Silurian, was first completely worked out in this country, and the fossils characteristic of each group and sub-group figured and described. And since these Palæozoic rocks of New York extend far and wide over the Valley of the Mississippi,—as far as Lake Superior on the north, and to Iowa and Missouri in the south and west,—the volumes of the “Palæontology of New York,” by Professor James Hall, which have been issued from time to time since 1847, have been the indispensable guide to our Western geologists, as they have gradually extended the area of their investigations over the interior of the continent. The sequence of the different groups was easily made out in New York, because there they lie conformably on each other, without having been much moved from their original position. In New England, on the other hand, rocks of the same geological age as those of New York cover a large portion of the surface; but, instead of remaining nearly as they were deposited, they are broken, turned up on edge, and folded, the fossils they once contained having been almost entirely obliterated, and their very inmost structure changed by chemical agencies acting under the influence of heat and pressure. Thus, while all was plain and easy to decipher on the west of the Hudson, on the other side all was doubt and difficulty, so far, at least, as the geological age and position of the strata were concerned. Under these circumstances it has only been by slow degrees, and chiefly by comparison of results attained on our northern borders by the Canada survey, and also, from time to time, by discoveries of little patches of rocks in which the fossils have not become entirely obliterated, that

the outlines of New England geology have been made out; and this has been almost entirely accomplished since the publication of Dr. Hitchcock's Final Report.

Although the Pennsylvania survey was begun in 1836, nothing was published, excepting a few meagre annual reports issued in the first years of the work, until the year 1858, when the Final Report, in three quarto volumes, was given to the world. The engraving and printing of these were done in Scotland, and in a style of great perfection and elegance. But the publication of the results of this survey had been so long delayed that a portion of its value was lost. The nomenclature proposed for the different groups of the palæozoic series never was adopted, that of the New York survey having already become familiar to American geologists; and as no attempt was made to work up the palæontology, except so far as the plants of the carboniferous series were concerned, these beautiful volumes can only be said to have had a local importance, being especially valuable for their details of the coal-bearing rocks, in regard to which a great amount of detailed information was laid before the public. More than any State in the Union, Pennsylvania needs an exhaustive geological survey, based on a thoroughly accurate geographical one. Her coal and iron deposits are on such a scale of magnitude, and of such vast commercial importance, that it is safe to say that the time will surely come when this will be recognized, and the people will demand a style of work equal to that of the best European surveys. Quite recently, after nearly twenty years of repose, the work of a geological examination of this State has, indeed, been taken up again. It does not appear, however, that this new work is to be based on and preceded by an accurate trigonometrical survey. Unless we are misinformed, it is, on the contrary, to be limited to three years in duration; and already a final report on one important object of investigation, petroleum, is spoken of as being ready for delivery, although it has not come into the hands of the writer. It is safe to say, therefore, that Pennsylvania will yet demand a higher class of work, and it may be that this will become evident to the people, while the present survey is in progress, so that this may be allowed to develop itself until it reaches

the desired degree of completeness ; if not, the work will surely be resumed at some future time ; while the loss thus incurred, by putting off until some distant day the thorough investigation of the resources of the State, although not appreciated by the present generation, will become very evident when the people have become educated up to a proper understanding of these matters. The attempt to supply an accurate map of a small area of the anthracite region, made by private parties, is well as far as it goes ; but private surveys can never carry that weight which public ones do, neither can they by any possibility reach the requisite degree of precision, unless limited to a very narrow area.

Virginia, which is also a State presenting a most attractive field to the geologist,— and in making this statement we may include both Virginia proper and West Virginia,— has done nothing in the way of a survey during the last thirty-five years. The detailed study of its topographic and geological structure would be a work of great interest, and could hardly fail to be at once remunerative to the State. Ohio, Indiana, Illinois, and Kentucky, four States which have large areas of coal-bearing land within their borders, and which also possess great agricultural resources, all have surveys in progress, which are more or less continuations of work begun forty years ago and taken up and dropped, in some instances, several times, and under different heads. In Ohio and Illinois the publication of what appear to be intended as Final Reports is drawing to a close,— the field-work, as it seems, having been finished. In Illinois five large volumes have been issued, which form a worthy supplement to the Palaeontology of New York, being chiefly interesting from their contents in this department. Valuable material of the same kind is found in the two published volumes of the Ohio Survey, and a large amount of detail in regard to the coal and iron resources of the State. To thoroughly work out the questions of economical interest which are offered by the great States of the Mississippi Valley will be a very serious undertaking, The surface throughout this part of the country is everywhere only moderately undulating ; but the streams— which are very numerous — have cut themselves valleys which vary considerably in depth and

width, in different sections. This erosion of the river-valleys, taken together with the general irregular wearing away of the surface by atmospheric causes, and the action, over a portion of the region, of the northern drift currents, have given rise to a kind of topography which requires a very minutely detailed study if the geology is to be laid down with accuracy. And, as the coal measures often lie quite near the surface, it will be easily understood that the amount of denudation which has taken place becomes a very important element in arriving at a knowledge of their extent and value. The time will come when this detailed work will have to be done ; but it is perhaps not to be expected that so extensive and costly an undertaking should be entered upon at once.

From what has been said in the preceding pages, the reader will, it is hoped, have gathered some idea of the nature and scope of a geological survey. He will not fail to have noticed that, as in geographical, so in geological work, the reconnaissance is a very different thing from the thorough survey. And as it is only countries far advanced in wealth and civilization which can have accurate maps of their domains, so it is only those possessing accurate maps which can have their geological work thoroughly done. And the more detailed the investigations which are made in any region, the more practically valuable they are ; indeed, it may be said with truth, that it is only work which is detailed and thoroughly accurate that can be trusted and used, where a problem of economical importance, involving a considerable expenditure of money, is to be solved. The reconnaissance answers the purpose of satisfying the curiosity of the general public, and awakens scientific interest, by opening new problems for investigation ; but the capitalist and the miner can only use as a guide that which goes into minute details, giving measures and distances with accuracy.

Another circumstance must be taken into consideration ; that is, the necessity of a partial development, at least, of the mineral resources of a country, before much that is trustworthy can be ascertained about their value. It is much easier for the geologist, as for every one else, to see through the mill-stone after the hole has been bored in it. Indeed, in many in-

stances, the character of the surface of a country is absolutely no guide to what is beneath. What could any one have known of the marvellously intricate structure and wonderful development of the Belgian coal-fields before the rocks had been reached and laid open by shafts and borings carried down through the horizontal, undisturbed strata which overlie the crumpled and dislocated coal-measures beneath, from which that little busy country derives so much of its wealth ? The geologist must have his opportunities ; and especially the mining geologist, for each mining district has its peculiarities, and these can often hardly be guessed at before they have been revealed by actual working. It is only in the oldest and best-known mineral regions of Europe, where work has been carried on, uninterruptedly, for hundreds of years, that one can feel a tolerable degree of security in giving an opinion in regard to the value of a newly opened metalliferous deposit ; and it is there that the importance and value of accurately kept records of previous work are shown to be of so much value. As a contrast to the completeness of our knowledge of what has been done and is doing in Europe, in the way of utilizing the mineral deposits of the various states, let the inquirer consider how little is definitely known of the present resources of Mexico and the South American countries, which have been so productive in the precious and other metals in former days. What a record of ignorance and waste is there displayed, and how wretched the net result to the people !

If our own geological surveys, begun when the science was almost in its infancy, and when, indeed, in this country everything was yet to be learned, have thus far had no considerable immediate practical value, they have been of great importance in the way of developing a taste for the natural sciences, which are all more or less included in the study of geology. And there was no other method by which progress could be made than that of beginning, and doing the best that could be done under the circumstances. The condition of things has greatly changed in this country since it was thought that the physician could leave his patients or the clergyman his pulpit, and give an authoritative opinion on the structure and mineral resources of the country. Schools of science are now numerous ;

and some of them, at least, fairly well equipped for teaching those specialties which are needed for doing good work in geographical or geological surveys. Forty years ago there were, at the most, half a dozen Americans pursuing scientific studies in Europe ; now the number may be counted, probably, by the hundred. Could the knowledge and ability we have in the land be economically and judiciously utilized, a large amount of first-class work could be done, and fine results obtained ; and that, too, without any considerable increase in the expenditure beyond that which is now habitually incurred.

We come now to make a practical application of what has been said in the preceding pages, and in a previous article on geographical surveys, to the State of Massachusetts. Of what has been already done here mention has been made ; and it has been noticed that the matter of a new survey was before the Legislature at its last session, and was the subject of a report from the "State Board of Education," to which the question had been confided for examination at the preceding session. The bill introduced for the purpose of organizing a topographical, geological, and biological survey of the Commonwealth failed to become a law, so that the subject remains open for discussion.

And before commencing an examination of some of the principal points to which attention ought to be given in this connection, it may be well to mention that the area of the State of Massachusetts is usually given at 7,800 square miles, while the population, by the census of 1870, was very nearly a million and a half of souls, so that we have an average density of 186 to the square mile. In the United Kingdom of Great Britain and Ireland there is an average of 260, in Belgium of 462, to the square mile. In Massachusetts the population is considerably more dense in the eastern than in the western and northwestern portions. The most thinly inhabited part of the State has also the most uneven surface, although there is but a comparatively small area which is too mountainous to be brought under cultivation. Massachusetts is essentially a manufacturing State : according to the last census the value of her manufactured products, in 1870, was nearly \$ 554,000,000, while the figures given for New York — with six times the

area and three times the population of Massachusetts — are \$ 785,000,000. The wealth of Massachusetts is only exceeded by that of New York and Pennsylvania, and is nearly double that of New York in proportion to its area. The metalliferous mines of this State are of little importance, but the quarries of building material are extensive ; although, as compared with the manufacturing interest, the value of their product seems but trifling. The value of the iron mined was, in 1870, according to the Census Report, \$ 30,000 ; no other metalliferous ore is mentioned as having been worked in that year in Massachusetts ; neither is there a record of any produce of coal. The value of the products of our quarries is given at \$ 1,362,648, or about $\frac{1}{400}$ of that of our manufactures. These are some of the principal data to be kept in mind, while discussing the subject of geographical and geological surveys with reference to the State in question.

It will be admitted by all that if any one of the United States can afford to carry on a thorough survey, it is Massachusetts. The density of her population is considerable, even as compared with that of some of the most thickly inhabited European states ; her wealth is great, and the development of her commercial and manufacturing interests has been, and is, rapid. Land is valuable, and is likely to become more so from year to year, and economy and skill are needed in order that a State which has become wealthy rather by means of hard work and indomitable energy, than because she has been bountifully provided with natural resources, may continue to occupy a high relative position, in competition with other portions of the country which have a richer soil and a much greater supply of mineral or metallic wealth.

In considering what kind of a topographical survey is needed, we have to inquire how such a work is utilized after it has been completed, or, in other words, what is the pecuniary inducement for its prosecution. All would admit that it would be unwise to enter upon an undertaking which must of necessity be very expensive, without a clear understanding, at the outset, of the reasons why the expenditure is to be made. Besides, the scale and degree of accuracy of the work to be done depend on the use which is to be made of the results ; until this

point has been settled, it would be idle to estimate its cost, or to attempt to limit the time of its completion. Now, the principal objects of the great topographical surveys in Europe are : *first*, to furnish the government with the necessary data for fairly and accurately determining and apportioning taxation ; and, *second*, to make it possible for transfers of real estate to be made with ease and precision. In other words, the cadastral, topographical, or ordnance survey — by whatever name it may be called — is a part of the machinery of the government, and, as it appears to most civilized states, a necessary part. It is true, also, that topographical maps are of importance on the Continent,—where wars have been, and are likely to be, frequent,—for guiding the movements of armies ; but this has been a consideration of little weight in England, and is still less to be taken into account here. The peaceful aspects of the subject need only occupy our attention. In addition to the great and all-important uses to which an accurate topographical map can be put, namely, those connected with taxation and the transfer of real estate, there are many other minor ones, which have already, in part, been suggested in the preceding article on this subject. It can be said with truth, however, that we have had no such accurate surveys as are going on in the different European states, because here the people do not know the uses to which such work is put, while there the government does know. It is, therefore, most reasonable to suppose that, in a country where the people are the government, the necessary preliminary to such a work as that we are now discussing will be increased knowledge on the part of the people. Let them but once fully comprehend the advantages which such a survey offers, when well done, and they would never be willing to do without it. Let the work be begun without a full understanding, and a settlement by legislation, of the uses to which it is to be put, and the probability is strong that it would be stopped, as soon as a “realizing sense” of its cost began to be felt. Hence we argue that, instead of beginning another Hoosac Tunnel, which is sure to cost a great deal, and which perhaps there may not be intelligence enough in the State to utilize after it is done, the subject of a thorough survey be fully investigated by a competent commission of ex-

perts, who themselves have no axes to grind, and who are not looking chiefly to the question of how their own pockets are to be affected by the transaction. Let such a commission, we say, find out by careful inquiry how work of this kind is done in Europe, and how utilized there; and then let them investigate the question whether the conditions in this country are such that it is possible for us to reap the full advantage of so costly an undertaking. A careful discussion of the subject should precede final action.

The crudeness of the Report of the Board of Education is indeed remarkable; and, in looking it over carefully, it is difficult to avoid the conclusion that the members of the Board, knowing nothing practically of these matters, have allowed themselves to be counselled by those who, from motives which it is not difficult to divine, were more anxious to have the work done, than to have it well done. It seems a pity that, after forty years of supposed development and improvement, the Legislature and the people of Massachusetts should find themselves, in reference to the question of a topographical survey, about where they were in 1830, ignorant of the nature and use of the work proposed, misinformed in regard to the methods required for doing it accurately, and led all astray in the important matter of its cost. Indeed, the main object of the report seems to have been to create the impression that the whole thing can be accomplished with but a trifling expenditure; that is, for less than a tenth part of what it is thought necessary to expend, per square mile of area surveyed, on the Ordnance Survey of Great Britain and Ireland. To make this appear reasonable, it is suggested that the old Borden triangulation can be utilized; and then, it is added, that Congress having provided that the Coast Survey shall "determine the necessary triangulating points in every State which shall make appropriations for a topographical survey," therefore the triangulation can be done at the expense of the United States. Thus it appears that two different triangulations are to be used in the new survey, neither of which is to cost the State of Massachusetts a penny; but how the two are to be combined so as to form one harmonious whole is a problem on which no light is thrown in the Report. The idea is simply an absurdity.

Any one acquainted with these matters would recognize the fact at once that the old Borden triangulation could not be used in a new survey, under any circumstances ; that, even supposing it were accurate enough, it would be more expensive to determine the position of the old stations than it would be to make new ones ; and if Mr. Borden's work is to be made use of, all his stations will have to be occupied again for the secondary and tertiary triangulations, which never were made in the previous survey. The idea, also, that the United States can be relied on to furnish the main triangulation seems to us a delusion. As has already been shown, if the whole amount appropriated by Congress for this kind of work were to be expended in Massachusetts, it would only enable the Coast Survey to carry on the triangulation with a moderate degree of rapidity, and it would certainly require several years for its completion. And does any one suppose that it will be possible to limit to one State only the expenditure of money which is now carefully spread over a dozen or more States, in accordance with the usual method of not favoring one part of the country more than another, when the United States treasury is to pay the bills ? Or is it fair to take it for granted that it will be possible to secure from Congress so large an increase of the appropriation for this special purpose as would be necessary in order that a triangulation should be made of the whole country ? And, if granted for one year, what security would there be of its continuance during the next ? Besides, there are other reasons why the whole survey, including the primary triangulation, should be done by the State itself ; but to enter into a full discussion of the subject would require too much space and too many technicalities, and this must be left for a more suitable occasion. A thorough investigation of the whole matter would settle this, as well as the other points which have been suggested. The recommendation that, for the contour lines, "exact measurements be taken only every one hundred feet, and that the auxiliary lines between them be filled in by the topographer on the spot," might mean something in a mountainous country, where minute accuracy was not deemed essential ; but such a style of work is entirely unsuited to the nature of the surface of this State, and the character of the

results which will have to be obtained, if the survey is to be one of permanent value, and to be utilized for the purposes set forth in the Report in question.* It is therefore not right or reasonable that the impression should be given that a topographical survey of Massachusetts can be made for \$175,000, which is the estimate of its cost made by the Board of Education. The old triangulation, only partially completed, cost nearly half that sum, and it was executed at a time when one dollar meant at least three times as much as it does now.

In regard to the geological part of the contemplated survey, the first thing to be considered is this ; that the geology cannot be put upon the map, before the map is ready to receive it. The geological and geographical work cannot be carried on *pari passu*, without loss of time, increase of expense, and liability to error. The painter would not be asked to furnish a picture, unless he had a canvas on which to work. All familiar with geological field-work know that it is impossible to proceed with accuracy and rapidity, except map in hand. The organization of a geological survey then should be deferred, until some of the sheets of the geographical map are done and engraved ; and this must, under any circumstances, occupy several years. But, of all the States of the Union, Massachusetts is one which has least need of a geological survey. This is not a region rich in mineral resources, and it never will be, no matter with how much care its geological structure is investigated. The impression is given in the Report of the Board of Education, that a survey will " develop our coal-fields," and transform us into an important mining community. This is a delusion : if our coal-fields are ever developed,—that is, if their extent and value become thoroughly known, and it be found that they can be worked with profit,—it will be after

* To illustrate this, it may be mentioned that in the Connecticut River Valley the points at which the "exact measurements" were taken would be about fifty miles apart ! That is, if a hydraulic engineer at Springfield wished to get some accurate information from the State Survey for use at that place, he would find on examination that there was a point, the altitude of which had been fixed with precision on purpose for his convenience, and he would find it — at Greenfield, or possibly at Northampton ! And similar conditions will obtain in all our river valleys, where the fall is but slight, and, consequently, differences of level of a few inches will be of the greatest importance.

many and expensive underground explorations have been made by boring and otherwise, and when, so far as we can now foresee, conditions shall have become quite different from what they now are. Previous attempts to make our coal-mines profitable have failed, not for want of means and experience in coal-mining generally, but because the rocks are too much broken up, and the coal-beds themselves too irregular in thickness and position, to make it possible to open and work them without loss.

It is no part of the work of a geological survey to "develop" either coal-fields or metalliferous veins. Development must come from actual working, or from systematic exploration by numerous and expensive borings. That this should be done at the cost of the State would, no doubt, be agreeable to the owners of the land beneath whose surface our coal-fields are presumed to lie; but it would hardly be considered by the people as a legitimate expenditure of their money.

There are within the borders of this State several large and well-defined veins in which argentiferous lead and copper ores occur in considerable quantity. At the time of Dr. Hitchcock's survey, they were considered by him as likely to be "of great value to posterity, if not to the present generation." All the attempts at working them have, however, proved to be unprofitable ventures; although a great deal of money has been spent in this way at various times since 1765. The same has been the case with the other metalliferous veins of New England; almost without exception the mines which have been opened on them have been disastrous failures. Eaton, Shelburne, and Warren, in New Hampshire, may be cited as typical localities, where flattering surface indications have led to extensive mining operations, without any permanently valuable results; and it is now many years since these workings were abandoned, with but little chance of being resumed. These facts should be borne in mind by those who are disposed to look on every new discovery of metalliferous ore within our borders as likely to lead to developments of great importance. The experience of the past teaches the necessity of great caution in the expenditure of money on mineral veins anywhere in New England, however flattering may be the surface indications.

That wild speculations and hap-hazard investments in entirely undeveloped mines are not likely to be followed by results favorable either to the individuals concerned or the community in general may also be pretty safely affirmed.

The structural geology of Massachusetts is not well understood, nor will it be for many years to come, for reasons which have already been hinted at in the preceding pages. Little by little it will be worked out; but a geologist appointed by the State will have few advantages over those which have been possessed by the ablest men in the profession who have, from time to time, tried their hand at deciphering the puzzle, having no other motive than the interest which it presents to the scientific inquirer. Professor Dana, our ablest structural geologist, has studied the hills of Berkshire, and begun the elucidation of their structure. James Hall, Henry D. Rogers, and others, have done the same. If the Legislature wishes to spend money in this way, let it be done; but it would be wrong to let it be thought that any report on the geology which might be the result of the expenditure would be a finality, so far as the geological structure of the State is concerned, or that it would be of much importance in the way of developing unknown mineral treasures beneath the surface.

It appears to the writer, however, that there is a way in which a State, situated as is Massachusetts in respect to geology and mining, may not only do good service to science, but also receive a *quid pro quo* in the way of valuable information on questions of economical importance to the people. All will admit that it is desirable that there should be somewhere in each State a trustworthy source of information in regard to the mode of occurrence and value of the various minerals and metalliferous ores which are, or are thought to be, from time to time discovered. And it is also desirable that a history of the development of the resources of the State, in this department of its industry, should be kept, and such statistics collected as it is possible, under our form of government, to procure. The question arises, how to have a permanent source of information on these subjects, which shall be out of the reach of politics and politicians, where one who does good work will feel secure in his position, and not be obliged to spend a con-

siderable portion of each year in lobbying his appropriation through the Legislature, a humiliating necessity, in connection with our State surveys, which is, of itself, enough to frighten off the best men from having any connection with these undertakings. We would say that the best method of bringing about these desirable results would be, for the State to endow a professorship of economical geology in some institution of learning, that one, of course, being selected which should be deemed likely to keep up the highest standard of honesty and ability among its professors. Coupled with this endowment should be a proviso, that the appointee should report to the executive either annually or biennially, on such subjects connected with the geology and mineral resources of the State as might seem to him to be of the most importance at the time. These reports could be laid before the Legislature, and printed or not, according to their value. If the person selected to fill the position were a man of high ability, no doubt his reports would command attention, and well repay the cost of printing, while their sale would defray a part or the whole of the expenditure. In this way a perennial source of information would be brought into existence, and the amount required for this purpose would not exceed that called for by the Board of Education for a geological survey, which would be limited in time, and, after all, only the expression of the opinions of one person, based on the information obtained during the short period of the continuance of his own work. For it must not be forgotten that much of that which is considered, in this country, as properly belonging to the business of a geological survey, is work which ought never to be brought to a close. New facts are always turning up, new discoveries are made, commercial and financial conditions change, new uses are found for old materials previously deemed of no value, accumulated experience and knowledge throw light on what was once obscure: all these circumstances indicate that the time will never arrive when everything will be known in regard to the geology of the State, and that it would be wise for the Legislature to recognize this, and make provision for gathering and systematizing the facts as they are developed, and for faithfully doing the best that can be done to make them available to the people.

J. D. WHITNEY.

- ART. III.—1. *Journal et Correspondance de André-Marie Ampère.* Publiéés par MME. H. C. Paris (J. Hetzel & Cie.). 1872.
2. *André-Marie Ampère et Jean-Jacques Ampère. Correspondance et Souvenirs de 1805 à 1864.* Recueillis par MADAME H. C. 2 vols. Paris (J. Hetzel & Cie.). 1875.

ABOUT three years ago there was published in Paris a little volume, entitled the *Journal et Correspondance de André-Marie Ampère*, of which mention was made at the time in many journals, and attention was called to it as a record of the mournfully happy youth of a celebrated and interesting man. Some of our readers will perhaps be glad to hear of the appearance of two more volumes, carrying on the account of A. M. Ampère and of his son, from the year 1805, when the first volume concluded, to the end of their lives. The idyllic first volume was simply charming ; no one could read without enjoying it this unpretending record of modest love too soon brought to a close by the early death of the loving and beloved wife. Perhaps the greatest charm of the book is its perfect naturalness ; the letters are real letters, written in thorough sincerity, without any feeling of posterity looking over the writer's shoulder, and among people too closely united to try to impose upon any public, even a public of one. Consequently, before we lay the book down, Ampère, and Julie, so shy and hard to win, but so devoted when won, and her charming sister Élise, with her lively imagination, her warm heart, and her love of fun, — a quality, be it said by the way, lacking in the other two, — are all nearly as much people we know and love as those we see around us to-day. In fact, if there be a difference, it is that we know the people in the book rather better, for, without having to serve the apprenticeship of making an acquaintance, we are let at once into the inmost feelings of their lives, as expressed to those nearest to them.

It has been well said that the true and frank diary of a fool would be as interesting a book as one would care to see. Pepys's Diary is a proof of this ; for though in practical affairs he was far from being a fool, he certainly shows how foolish an

intelligent man can be in the privacy of his diary. Although Ampère's letters and diary lack the historical value of Pepys's, they have a far higher interest in the light they throw upon the private life and character of a great and good man. This is one of the few books of which the stale compliment is true, that it is more interesting than a novel. Those who have once read it will not forget this ingenuous record of his love. In a blank book, scribbled over with mathematical calculations, he wrote the little memoranda of his courtship. Ampère was no self-conscious Werther, who accurately observed and laid bare the workings of his own heart ; his simple entries touch us all the more, however, that they are so absolutely unconscious in their candor. The first one is only an unfinished sentence, written on a loose leaf, running as follows : "The voice of nature spread through my soul a vague, intolerable restlessness. One day when I was walking after sunset by the side of a lonely brook —" This is the key-note and prelude to the approach of Julie ; and on Sunday, April 10, 1796, when Ampère was twenty-one years old, we find this entry, "I have seen her for the first time." The reader will notice that he at once begins with *her*. There are no doubts and self-questionings as to whether this is really the ideal woman, the being best qualified to comprehend his heart and aid his development ; there are no fears lest, though charming for the time, she may not always be able to enchain his wandering fancy. No, Ampère's fears are quite different in character. September 17, five months after their first meeting, we read that he "began to open his heart" ; and that Julie at least perceives his love, we learn from a letter of Élise to her, written about this time, in which she cannot resist the temptation to make a slight reference to it. The passage is worth quoting, for the light it also throws upon Élise's affection for her sister : "You say you do not wish to speak to me of things which will only tire and bore me. O, I beg of you, dear Julie, do not be afraid of that, let your thoughts run on as they please ! What would one think of friends who only shared their pleasures ? That plan would not suit my taste, and it will never be, I trust, the one that we shall follow. Ours is of such a sort as to reach even to the little hidden corner of Ampère."

That Élise has her doubts, however, about the advisability of this plain-speaking, we see further on in the same letter, when she says : " How many things we shall have to talk about when we meet again ! But for all that I don't know in what vein to write to you ; you yourself must decide whether I may speak or must be silent." At the time of this letter Julie was on a visit to her brother and his wife at Lyons, and in the letters she wrote to her sister Élise, shows at first some inclination to ridicule Ampère for the naïve way in which he betrays his attachment, but before long she is won by the same ingenuous charm which obtained for him throughout his life so many devoted friends. In one letter Élise says of him : " He interests me by his frankness, his gentleness, and, more than anything, by the tears which sometimes come into his eyes against his will. Not the slightest affectation, none of those romantic phrases which so many others use. Decide as you please ; but let me love him a little before you do, he is so good !" And again, a little later, with a mixture of affection and humor she gives Ampère's account of the visit he made Julie when she was still in Lyons, without first getting permission from her mother : —

" He said he was very much afraid he had offended you, and that you said, ' I am surprised, sir, to see you here, and mamma will be sure to give you her opinion of such conduct.' ' Well, if I have done wrong I am not to blame. I was told I ought to go out and see people ; so when I arrived in Lyons I went to your son's house ; I found Mme. Carron there and her mother, Mme. de Campredon ; they told me your daughter had arrived, and that I could call the next day and get some letters. I went, and I am very sorry now I did, for I am sure I have offended Miss Julie.' Mamma saw that he was so unhappy, that she added at once, ' But, sir, you could not have known that my daughter was at Lyons.' He interrupted her with, ' I am sorry to say I knew it the evening before ; I told you I knew it. In spite of that I went to get the letters your daughter-in-law had promised, but which she did not give me.' I said, laughing, ' My sister probably thought that you would stay longer at Lyons, and so it was rather a warning than a reproof, fearing that you would call too frequently and make people talk. But one should not cry over spilled milk.' And indeed his eyes were glistening, and his chin was trembling as if he were ready to cry. ' And so you really think

they are not too angry with me? That makes me really happy. And you, madame, are not so much offended as I had feared? Mamma said she would have preferred it had not happened, but that since his intention had been to give her pleasure in bringing news of you, it would be strange if she were angry. He said nothing about his intention. Claudine (the maid) came in and went out, and I asked him a thousand questions about you : ‘What was going on the first time that you were there?’ ‘What were they doing?’ ‘All the ladies were going to the play ; they asked me to go too, but I was afraid.’ I should have liked to ask how you were dressed, but I was afraid you would be annoyed if I did ; we spoke of the Lyceum, he told us the names of the professors, and said that if they established a course of astronomy, Mr. Molé assured him there would be a place for him ; that this same gentleman strongly advised him to go to Paris, where he could certainly find something to do. To this he replied that he could not make up his mind to go away from his mother, nor to leave the neighborhood of Lyons. You can easily guess why. Such, my dear, was our whole conversation. He was the first to notice that it was getting late, which he generally forgets when you are here ; he went, and left me amazed at the shininess of his hat, his stylish knee-breeches, and his dapper figure. He was scarcely gone before Claudine came in and threw up her arms, and said he had grown such a dandy (*muscadin*) she would hardly have known him.”

That this little hit about Ampère’s staying late was a just one, we know already from several confessions to that effect in his diary. For instance, the day when he “read the *Intrigante* aloud, and stupidly had to be told twice to go,” and “still more stupidly stayed a little longer.” However, in spite of her occasional laughing at him and telling him “not to stare at Julie so much when strangers were present,” Élise really does her best to forward his suit with her sister, or at least to give him fair play. This may be clearly seen in a letter written when she is afraid that some of Julie’s friends at Lyons — whom she characterizes boldly as persons “who, if they do not change their manner of looking at things by the time they are thirty, will be very silly all their lives” — are unduly influencing her to refuse Ampère on account of his awkward appearance. After warmly defending those who are natural and unaffected, even if somewhat odd, she goes on to say : —

"In short, my dear, I am a little provoked with those who think so much of the outside, and who imagine they know everything, when they can make a graceful bow, and utter some pretty, useless compliment. . . . If I could persuade you that he no longer thinks of you, perhaps you would like him better; but, unfortunately for him, I believe the poor man thinks of nothing else, and I pity him very sincerely, knowing that, except Mme. Périsse, all whom you see are prejudiced against him on account of his appearance, and do not take the trouble to consider whether he would make his wife happy or unhappy, which is, after all, the most important thing. I am not so prejudiced in favor of manners and good looks, as to say that every one who lacks them lacks also fine qualities. Frivolous people, who only look at the outside and judge by that alone, are far from the right way. True, Ampère is not superficial, and for that very reason, if he were paying attention to any of those young ladies, they, and rightly enough, too, would not answer so quickly. And why not do the same for a friend? Why try to keep her from giving serious attention to a matter which would set us busily thinking if it concerned us? Why indeed? Because we never examine with so much care what does not personally concern us, and that one must be really fond to think of all the *pros* and *cons* and treat another's affairs as if they were our own. When one says, lightly, 'O, what a man! how could you make up your mind to marry him? He has no style, he is blundering, shy, and awkward,' one imagines all said and arranged; but, I tell you once more, if one had to decide for one's self, one would think it over more, and neglect the rest to consider the character, the principles, and even that simplicity which a moment ago seemed like lack of polish. There, my dear sister, that is what I think about it, what I have already said, and what I hold to."

This was very sensible talk from a young girl of eighteen, and it shows amiability in Julie that she was willing to receive advice of this kind from a younger sister, whose cleverness, however, and more decided character she was accustomed to lean upon. In spite of Julie's beauty, her golden hair and the blue eyes which had so fatal an effect on the susceptible heart of Ampère, in spite even of her tender grace and the gentleness and candor which Élise praises so highly in her, we cannot help being more interested in the warm-hearted young girl who has such pleasure in the beauty and goodness of her sister, and the admiration she excites, and who is so generous in defending the

absent, and so quick to detect affectation or inconsistency ; we cannot fail to admire her high-mindedness and love of truth and goodness, and like her none the less for her charming wrath against Julie's unwise advisers.

At length, whether moved by the newly acquired graces which had so much impressed Claudine, or by her beloved Élise's approval of him, or by the pleading of her own heart, Julie at last began to relax her severity ; and in August, 1799, three years from their first meeting, she rewarded André's humble devotions by becoming his wife. Their epithalamium was composed by André's *ami de cœur* Ballanche, he who afterwards became the lover, or, rather, the follower of Madame Récamier. The first year of their marriage was happy enough to make all of Ballanche's good wishes seem like prophecies ; but after the birth of their son Jean-Jacques, in August, 1800, Julie's health failed her. The story of her gradually increasing feebleness is narrated in the letters from her, then with her own family at Lyons, to her husband, who is at Bourg, hard at work giving instruction in the mathematics and the physical sciences, and finding time also for original investigation and study. It is a pathetic story these letters tell of Julie's cheerfulness, trying to hide her afflictions, of the kindness of her relatives to her in her suffering, of Ampère's eager, yearning love for his wife, and of her tender, motherly care of him, reminding him to remove stains of acid from his hands before going to table, not to wear his old coat by mistake for his new one, and above all to be careful to lock up her letters that no one may read them. She little thought they would be printed in a book in the next century and copied out for general reading into magazines and reviews.

Julie died July 14, 1803, just after Ampère's manly struggle with poverty was ended by his obtaining the much-longed-for position at the Lycée at Lyons, which was to put an end to their separation of three years, the severest trial of the courage and patience of both. Julie had looked forward with longing to the day when they could be together again. "O yes," she writes, "we shall be happy ! our little boy will be young and gay for a long time yet, and some day in some little place in the country we shall be at peace. My husband and son shall

be with me and keep me well." But the best of husbands could not make her well again ; and though we read in Ampère's diary, under date of April 17, "I returned from Bourg never to leave Julie again," he was only able to keep her with him for three months.

That her death was a terrible blow to Ampère no one who has read these letters could doubt. With Julie died his youth, and though in these two new volumes we meet him again as a man only thirty years old, with his love for his friends and his interest in his studies unimpaired, he seems a much older and sadder man than the Ampère we knew in his letters to Julie, which were full of cheerfulness and hope. Ampère's health was at first impaired by the shock, as we learn from a letter from Élise, begging him to take care of his health and to consult the physician. Her remonstrances and those of his other friends had some effect ; and Ampère, having exchanged his position at Lyons, now become hateful to him, for one in the Polytechnic School at Paris, plunged into work as a means of forgetting his loneliness. Incessant study was his only relief from gloomy thoughts, and his letters to his friends and relatives show that his long and keen suffering could only be deadened by work. What especially fascinated him at this time was metaphysical study, in which pursuit he found Maine de Biran a congenial companion ; but his metaphysics, successful in making him forget in part his grief, had the result of making him feel uncertain for a time about his religious principles, which had been his greatest consolation. It was in distress of this sort that he wrote, February 25, 1806 :—

"Bredin, you who conceive clearly that there is no contradiction between the Creator's kindness and His damnation of the guilty, try to convince me of it. Try with Bonjour to show me the truth ; let him formulate the objections, and do you make the answers. Then send me the result of your conferences ; perhaps you may change my views. Do me this favor, and save me from the abyss into which I am falling. Perhaps D'Ambrieux would be willing to try to enlighten me."

These friends and many others, notably Ballanche and Camille Jordan, had formed a society in the year 1803 for the investigation of the foundations of the Christian religion, the proofs

of the divinity of its origin, etc., and the defection of Ampère would have been a great blow to them all. Hence we see his friends urging him to abandon the study of metaphysics, and Ballanche and Bredin strongly advised him to marry again. Ampère, who probably never refused a friend anything, let himself be persuaded by them, and was introduced to a Mlle. P——, — her full name is discreetly kept hidden by the editor of the letters, — whom, in the year 1807, he married. This union, however, though advised and arranged by the sagest of men, his intimate friends, was a very unhappy one. His wife, who only married him from ambition, apparently, did not care for him at all, and treated him with excessive unkindness, and, in addition, his mother-in-law was all that a mother-in-law in fiction could be. After about a year of suffering, Ampère separated from his wife, retaining a daughter she had borne to him meanwhile, towards whom the heartless mother had never shown the slightest affection. After this futile attempt to secure domestic happiness, he took his mother and his children to live with him at Paris, and devoted all his ardor to his work. He was soon, however, to find a new and great interest in the growing up of his son Jean-Jacques, to whom we find continually more frequent reference in his father's many letters to his friends. Jean-Jacques is indeed fairly the hero of the last two volumes, and there is, in fact, more of the hero of romance about him than about his simple, childlike father. He was good-looking and an entertaining talker ; he had graceful manners ; and, indeed, something of Julie's charm seems to have descended to her child. But, however unlike his father in externals, he seems to have resembled him in more important particulars, having, like him, a warm heart, an enthusiastic spirit, and great love of truth. The bent of his talents was very different from his father's. We find him at sixteen in a painful state of indecision about his future course of life. In compliance with André's wishes, he at one time thought of becoming a manufacturing chemist, but he found it hard to reconcile himself to this plan. His teacher's manners were offensive to him, and he says, " My ignorance of mathematics impresses him disagreeably." Moreover, he was further discouraged by being told that he must forget all he had learned in liter-

ature, so that he might occupy himself with "useful things." "Useful or not, I shall never forget Racine or Virgil," wrote the future *littérateur*. It must have been painful to so ardent a lover of science as André-Marie to find his son feeling so much distaste for a career in which he had won for himself such honorable success. Nothing speaks more clearly the unselfish love and confidence of the father and son than their attitude towards each other at this time ; and, although André-Marie found it hard at first to be reconciled to his son's devotion to literature, it is yet touching to see how he does all he can to help him by direct encouragement and by the most ardent sympathy with all his efforts. It was decided that Jean-Jacques should study philosophy and *belles-lettres*, and in pursuance of this decision he attended a course of lectures on philosophy by V. Cousin, who was attracting about him a number of ardent and romantic young spirits. Among these Ampère made many friends, who, like himself, were more or less deeply tinged by the Byronism and Rénéism of the time. Jean-Jacques took a prize in philosophy, but this did not prevent him from writing letters about the evil of this world in the most despairing strain, and from feeling undue sympathy with Werther and Manfred. He even denounced philosophy :—

"How I detest, how I execrate philosophy ! It has disgusted me with everything. I look upon it with horror and contempt, and I never wish to hear it spoken of again. I think I will resign from the society, that I will see even Cousin, whom I shall always admire and love, no more. . . . Can you believe that nowadays I have visions of glory, poetic dreams ? Only yesterday I lay for two hours on my bed, dreaming of scenes, dénouements, and plots. Poor fool ! I even composed some verses, but I doubt if I ever finish anything. But what difference does it make ?"

This state of mind, which is one not unknown to youth, was brought to an end by an event which had the most marked influence on the rest of his life, namely, his introduction to Madame Récamier, that famous woman who already counted among her admirers some of the most remarkable men of the time,—Chateaubriand, Mathieu de Montmorency, and Prince August of Prussia, to mention the best known. Jean-Jacques first saw her on New-Year's day, 1820, when Ballanche took him

to call upon her. He was at once greatly struck with her beauty, as she sat dressed in white, leaning back in an arm-chair of light blue damask, and bearing on her lips that smile which her lovers and friends were never tired of describing as her greatest charm. In his confusion he broke a valuable paper-knife which he had taken from the table and was turning in his fingers, and naturally this accident plunged him into still greater confusion. Madame Récamier, however, quietly slipped the pieces behind her cushion and went on with the conversation as if nothing had happened, much to Jean-Jacques's relief, who was never tired of praising her kindness and tact, as exemplified by this little incident. He spent some weeks of the next summer near her ; and when they first met after their return to Paris, she made jesting reference to the possible danger to his heart from the companionship of her niece, then a young girl. This was too much for Ampère ; he fell upon his knees, saying, with a sob, "*Ah ! ce n'est pas pour elle.*" * At the time of this avowal Ampère was but twenty years old, while Madame Récamier was forty-three, she having been born, oddly enough, in the same year and, as it happened, in the same town, Lyons, as his mother, Julie Carron. But this difference of age did not prevent his forming a sincere and lasting attachment for her ; and she was herself attracted by him. In September, 1821, she invited him to stay at her country-place at Saint-Germain, where she was passing the summer ; he of course accepted gladly. He wrote to his father that he did not waste his time there ; that Madame Récamier was always urging him to work, and that his tragedy was advancing. He said nothing, however, of a little sketch, *La Dame de l'Abbaye*, in which he made very thinly disguised mention of his devotion to his hostess, whom he celebrates under the name of Juliette de Sancerre. One of his friends, Albert Stapfer, knew very well what delayed his return from Saint-Germain ; he wrote to Jean-Jacques, "When you were setting out for Saint-Germain no prayers of mine, nor promises of yours, could postpone your departure a single hour ; and now, when you ought to be back, a fortnight's postponement does not satisfy you. What am I

* *V. Nouveaux Lundis.* Par C. A. Ste.-Beuve. Tome 13me. p. 195. The whole of Sainte-Beuve's article should be read.

to think of that ? That you are very fond of Saint-Germain, am I not ? You have spoken of lonely walks, deserted paths. But I do not believe its loneliness is what pleases you. . . . You will make me hate that woman who has been so much loved." His letters, all of which Madame Récamier carefully preserved, show clearly the ardor of his attachment. Here is one written June 7, 1822 : —

" This evening has seemed to me like a happy dream ; I am not yet master of myself. I try in vain to collect my ideas ; the happiness which fills my soul confuses my thoughts. It does not seem to me as if to-morrow you were going away, and I were going away ; that to-morrow, and day after to-morrow, and for more than a week perhaps, I shall not see the little room which this evening was so brilliant, so delicately perfumed ; that I shall not see you, you whom I love so warmly. Why are there so many things between us, your former friends, your present friends, and so many ties ? O, if there were only no one but us ! At any rate, amid so many obstacles, a few moments are granted me, a few hours of agitation, enthusiasm, and delightful sadness ; a few of those moments which give charm and add regret to all the rest of my life. The better I know you, the more I love you ; and the more I love you, the more I feel the need of loving you. My works, my plans, my success, my discouragement, all belong to you ; it is you who inspire me, who console me, who elevate me ; I exist through you. I am glad it is so. I shall write the *Juliette* because that plan pleased you, because it will be delightful to pronounce your name in my verses, and to draw under that name a pure, tender, gentle soul, and that beauty in your glance and your features, which softens your voice, adorns your smile, and gives all your movements, your gestures, your whole being that charm which is all your own. You asked me to make a portrait of you. I have done so without meaning it. And you are going away, and I too ! I left you this evening ; I might have seen you longer. O think of me, pity me, and come back Saturday *par pitié, par charité !*

That Ampère, however powerless to escape this love which so took possession of him, did not deceive himself as to its hopelessness, we see from a letter written in the same month, shortly after the one just quoted. He says : —

" O, tell me the truth ! at times it seems to me as if your soul were touched by my fate and were interested in my future ; sometimes I have even fancied that this feeling, so pure and tender, with which

you inspire me, was not without charm for you, but I am so afraid of being mistaken. From day to day my whole life is centred in this affection. How cruel it would be to take the expression of your pity for that of your interest ! It is especially now, when I am away from you, that these fears distress me. A few words, I beg of you, to console me ; but, in heaven's name, do not go beyond what you really feel in your endeavor to calm me ; and what have I done that you should love me ? Ah ! I have loved you with all my soul, without deceiving myself about our situation, without dreaming for an instant of disturbing or altering the peace of your life.

"I have given myself up to a hopeless feeling, which has filled my whole heart. I cannot live without you, nor for you ; I see all that is impossible in my fate ; but how can I give up what makes my only happiness ?"

The contrast between the son's romantic affection for a woman as old as his mother would have been if she had lived, and the father's idyllic devotion to his wife, shows clearly the dissimilarity between the two. They were alike in their sincerity, however ; for Jean-Jacques, although he contented himself with many letters and an occasional smile from Madame Récamier, was as truly if not as ardently in love as was his father twenty-five years before him. That this love and devotion were not wholly thrown away on Madame Récamier we are led to believe by her permitting him to form a constant member of her little circle. Whether it was for the young man's best advantage and real happiness to have constantly before his eyes the charms and graces of the woman he loved in spite of so many obstacles, may well be questioned. How engrossing this attachment became will shortly be shown ; but before blaming Madame Récamier too harshly for sacrificing to her own love of admiration the youth of so brilliant and promising a man as Jean-Jacques, it may be worth while to consider how much good her companionship and the intimacy with her friends did him. She may have seen how much the society he met at her house did for him in freeing him from his acerbities, his excessive outbursts of violence, and in giving him an air of the world, and she probably lulled her conscience by determining to turn him from a lover into a friend at the earliest moment ; but a great deal of time passed by before that was done, and he wrote her many letters, be-

sides those quoted above, which must have made her think that she had before her a case to test even her well-known powers. She certainly did not discourage his attentions; besides receiving him almost daily in Paris, she permitted him to be one of the select circle she collected around her during her sojourn in Italy. This was a voluntary exile of hers, undertaken, as she confided to Jean-Jacques, in order to preserve her peace of mind by putting distance between herself and Chateaubriand, in whom she felt herself becoming too much interested. This avowal, perhaps made with the intention of pointing out another of the serious obstacles in the way of his love, explains clearly the “bitter thoughts” which troubled him at this time. But there was consolation, if not safety, in seeing Italy for the first time in company so congenial, and in being a friend chosen to drive out a detested rival from his mistress’s heart.

Before he started with Madame Récamier his emotions had been keen and painful. He wrote to her:—

“I no longer love study for its own sake; I love nothing without you. With you I would gladly do anything. O, what strength I used to feel in those moments of infatuation when I hoped to be for something in your life! . . . I do not pray that you trust your future to me; may it be happy! But, madame, a few more months, a few more moments, and then *chaos may come!*”

In his next letter, he says:—

“I am going. I have spent the whole night with my father in the most heart-rending distress. . . . I showed him plainly all my troubles. When he described for me his loneliness and sadness, I fell into his arms, and we both wept for a long time. He kept saying to me, ‘Do as you please.’ Even after this outburst of affection and tenderness, I felt I could not possibly part from you at this moment. . . . So I am going; I must. To part from you would be death.”

It was in October, 1823, that Madame Récamier, her niece, Ballanche, and Jean-Jacques left Paris, and in six weeks they were in Rome. How delightful this winter was to Ampère can be readily imagined. Not only was he in the society he most preferred in the world, but he formed there an affection for the city which in later years was almost the ruling feeling of his life. Now, of course, his devotion to Madame Récamier

was his ruling feeling. His father's great yearning to have him at home once more was only half concealed. Jean-Jacques did what he could to appease it by leaving behind him a tragedy which was accepted at the *Français*, but never acted, and by sending him fragments of other tragedies whose fate was equally obscure. André had the firmest belief in his son's genius, and there is hardly anything in the book more touching than his eager efforts to persuade him to devote himself to poetry, and his earnest solicitation of the opinion of critical friends. For instance, under date of September 20, 1823, he writes to Bredin: "Dear Friend, next Tuesday is a great day for me, it being set aside for the reading of the new *Rosamonde* (his son's play) before MM. Andrieux, Picard," etc. ; and again to his son, in the course of the next February: "I was delighted with the beginning of the *Juive*; I have just received the continuation. That is a long and difficult scene finished; the exposition is perfect." There is a singular contrast between his son's somewhat dutiful letters to him and the passionate notes to Madame Récamier. In September of the same year André writes a very happy letter to Jean-Jacques, announcing with joy his own election to the Chair of Physics at the Collège de France, and saying, "It will perhaps be agreeable to you to attend my lectures, but for me it will be a far greater happiness to know that you are there!" The poor man longed to have him back. Stapfer wrote him, "As for your father, he tells every one how your absence weighs upon him," so that already, in July, Jean-Jacques was promising to return. In October, André found that he had overdrawn his account and was four thousand francs in debt, owing to the mistaken kindness of his sister, who had not told him how matters stood. He wrote to his son telling him he depended on him to superintend the expenditures when he should return. Consequently, in November, Jean-Jacques started for home, which he reached in about a month, writing almost every day to Madame Récamier. Sainte-Beuve tells a story, without vouching for its accuracy, of André's saying to his son at breakfast on the day after his return, "It's singular, Jean-Jacques, but I thought it would give me a great deal more pleasure to see you again."

In Paris, Jean-Jacques devoted himself to work, writing verses, reading history, and studying Hebrew and Chinese. His frequent letters to Madame Récamier show how hard he found it to be separated from her. Work brought him but little consolation ; it was on her letters that he depended for what comfort he could get. In May, 1825, she returned to France, and Ampère passed the summer in her society, until the end of October, when she returned to Paris and he went off to make a visit to some friends. Before they parted she let fall some words, which seemed to him to point towards the possibility of her securing a divorce and marrying him ; but, of course, she was able to show him the impossibility of this. How far he was merely the victim of his imagination in forming the supposition that she might marry him, it is hard to say ; at any rate, a week afterwards, all that he demands is that he may see her, apart from her companions and his rivals, for a quarter of an hour a week. During the next year, everything went on as usual until August, when Jean-Jacques finally decided that it was impossible for him to go on in the same way any longer. He had already written to her : —

"All your letters have a tone of interest, an accent of friendship, for which I am very grateful. Why is it that this genuine interest and this kind and staunch friendship are powerless so far as my happiness is concerned ? All I ask of you is that you understand how I suffer in your society, and that you will not be angry with me on that account. It seems to surprise you ; but, considering my character, which is as bad as you please, is it strange that five years of imperfect familiarity, of attachment which has constantly had to be checked, of intimacy which successively deceives, saddens, allures, and discourages me, should have gradually thrown me into a state of perpetual agitation and irritability ? Have you never heard of certain tortures in which an agreeable sensation, prolonged, finally throws the victim into convulsions ? Well, that is my story. That being said once for all, we will never mention it again ; let us forget the future, which I cannot in any way figure to myself, and only think of the present."

But, in the course of 1826, unable to protract or end his suffering in any other way, he determined to leave for Germany and there continue his studies. Other circumstances tended to encourage this decision. André knew, more or less

well, how much disturbance Madame Récamier had brought into his son's life, and was continually urging him to marry some girl of his own age, and to forget this unhappy fascination ; and he had even selected Mlle. Cuvier, the daughter of the celebrated Cuvier, as the one who should console him. In a letter dated December 18, 1824, Jean-Jacques wrote to Madame Récamier : " This evening I went to see M. Cuvier, a visit to which my father, for some unknown reason, attached a great deal of importance. Since I only returned to Paris to oblige him in every way in my power, I could not refuse him this satisfaction." Sainte-Beuve speaks of his reciting an ode in honor of Italy that very evening, and makes warm mention of his charm in conversation. But Ampère did not like her father ; he speaks in the letter just quoted of his cold and pompous air, and of the disagreeable impression it made upon him. It is now an open secret that Mlle. Cuvier cared for him, but his heart was elsewhere, and he made up his mind to take to flight. He left Paris in August, 1826, much to his father's regret. At Strasburg he received a letter from Madame Brack, Mlle. Cuvier's aunt, containing merely the word *Revenez*, but he pushed on. Meanwhile, his father gave him this account of an evening spent with them shortly after the departure of Jean-Jacques : —

" When I got there Saturday evening, no one had arrived. Mlle. Clémentine asked me a great many questions about you. I said you would probably stay as much as five or six months in Germany, and I am sure that at that moment her face grew sad. I said you were collecting material for a work of some magnitude. M. Cuvier joined us, and several other people, and conversation changed ; but Mlle. Clémentine did not leave me, and without talking to me about my son, made the time pass more pleasantly than it has since you left."

Jean-Jacques passed the autumn and winter of that year at Bonn, attending the lectures of Niebuhr and Schlegel, and studying busily. In the spring of 1827, he travelled in Germany, visiting Goethe at Weimar. In July, he crossed over to Sweden and Norway, returning in October to Germany, where he was met by the news of the death of Mlle. Cuvier. She was at the time engaged to be married to M. Duparquet, as he had already been informed by a letter from his father,

which had been left for a week before finishing, and then bore the information of her suffering from a sudden hemorrhage. A fortnight later André wrote again :—

"Since I have heard of her intending to marry another, I go less frequently to see M. Cuvier, still taking care that my absence shall not be noticed. Mlle. Clémentine had asked me to write a letter in behalf of a young relative of hers who was about to be examined. Having forgotten his name, on the 14th of August — a day I shall never forget — I went to ask for it. Mlle. Clémentine, whose hemorrhages had begun again with more severity, was lying on a sofa ; since she had been forbidden to speak loud, she made a sign for me to come near her. When she had told me the young man's name, she began to question me about my son, and made me describe your voyage in all its details. . . . I felt I was listening to her for the last time. Her interest in you filled me with sadness, and touched me the more because the arrival of M. Duparquet did not put an end to her questions."

It was in about six weeks from that time that she died. Her death was naturally a great blow to Jean-Jacques, who, for a long time, was troubled by regret and remorse.

All his life at Bonn is fully described in his letters to Madame Récamier. These are calmer than those had been which were written before he left Paris, and fuller of incident and description of what went on about him. He had by no means forgotten his love for her, but it seems as if he were trying to take the attitude of a friend rather than that of a lover ; the work of cure had begun. It is easy to notice, also, the way in which he grew older and manlier during this absence ; for the first time he depends fairly upon himself. There are amusing bits in this part of his correspondence, as, for instance, this about Schlegel, whose vanity and foolishness annoyed Ampère, so that he found it hard to have patience with him. Fearing that his professor might have got wind of this, he wrote to Madame Récamier as follows : "If you could find a chance to speak to him a little about my admiration for him, you would do me a great favor, for, by a piece of unpardonable stupidity, I have given him some reason to doubt it. If you will lend yourself to this bit of Machiavellianism, a word as gracious as your portrait will set everything right." A month later she

sent him two copies of her portrait, one for himself and one for Schlegel, and soon she wrote to Schlegel, apparently with a satisfactory result, for Jean-Jacques says of her letter: "It has had an admirable effect; Schlegel now adores me. Your incense and your portrait have so thoroughly intoxicated his imagination and his vanity, that he has forgotten what he heard, and thinks it must have been a buzzing in his ears."

The most important incident, in more ways than one, of his trip through Germany, was his visit to Goethe, then in his seventy-eighth year. Ampère had written some articles on Goethe's dramatic writings in the "*Globe*," which had given great pleasure to the poet, and he consequently welcomed his young critic with great warmth. Ampère saw a great deal of Goethe during his short stay at Weimar. He wrote to his father: —

"I have been able to hear him talk for many hours at a time, expressing himself with a warmth and enthusiasm at least fifty years younger than he is. The most striking thing about him is the way he keeps with everything, is interested in everything, and is alive to everything; he talks about our vaudevilles as if he had just seen them; he knows Béranger's songs by heart; there is nothing going on in Germany in which he does not take part."

He said, speaking of Goethe's appearance, that the portrait was good, but that to know how he looked at home one should imagine a kind smile on his somewhat disdainful lips, and a fire occasionally flashing in his eyes. To Madame Récamier he wrote that —

"in his white dressing-gown, which made him look like a great white sheep, with his son and daughter-in-law and his two grandchildren around him, talking of Schiller, his own works, his plans, his reminiscences, he is the most interesting and most amiable of men."

After speaking of the *Helena* episode in the "*Faust*," he continues: —

"But if I go on you will think the German mania for adoring Goethe has seized me; but I am not yet so far gone as the good lady at whose house I am living, who was enthusiastic over the thought that the great man's thoughts were so numerous, that he had to have a secretary. To have a secretary is unprecedented!"

Much to Ampère's chagrin, shortly after parting from Goethe, he saw this letter printed, with but trifling alterations, in the "Globe," which everybody in Weimar read. He had, to be sure, spoken well about Goethe, but also with a certain irreverence, pardonable enough in a letter to a friend, but not what one would care to see printed in a paper of large circulation. Madame Récamier was to blame for this ; she had read the letter to a number of visitors, and one man asked permission to copy it for publication. She consented, little foreseeing one result, which was a letter from Ampère, which must have been one of the most disagreeable to read that she ever received in her life. She had taught him to overcome his outbursts of wrath, but his restrained sadness must have been effective. One cannot help wondering why she kept the letter. He said : —

"Did I not tell you that everybody in Weimar read the 'Globe,' and do you think that there or anywhere in Germany they would be pleased with 'the mania for adoring Goethe'? Do you think, especially, it is agreeable for me to expose to the ridicule of a little town a worthy lady in whose house, in whose family, I have lived for a month ; who has been almost as kind as a mother to me, and who has given me many letters of introduction for Berlin, for which she is rewarded in this way? . . . You see how you have imbibited my recollections of Weimar ; it is no longer possible for me to return there for Goethe's fête ; I am looking up in the map the way to avoid the place, when I should have been so glad to return for a few days. After all, my journey was too successful ; this is the only drawback I have had since I started ; it is strange that it should have come to me from you."

For a time after this incident we find him writing more frequently to his father than to Madame Récamier, and in the letters he sent her there is a lack of his usual warmth. They are decorous statements of facts rather than protestations of affection. There is every excuse for this chastened expression of indignation upon his part ; for, with this exception, this visit was one of the most gratifying events of his life. Goethe had admitted him into his intimacy, and had been much struck by Ampère's brilliancy as well as flattered by the devotion of the young writer of the "Globe." In Eckermann's report of Goethe's conversations, under date of May 3, 1827, can be found the great poet's flattering verdict about

his young visitor, which praises the justice and keenness of his criticism, and moreover says that he had risen above all national prejudices, and all the timid, narrow ideas of his contemporaries ; that he was rather a citizen of the world than of Paris alone. Decidedly, this is the most brilliant feather in Ampère's cap.

Soon after his return from Germany he was obliged to accompany his father, whose health had begun to fail, to the South of France, where the two spent the winter of 1829–30. It was in the following spring that Jean-Jacques made his first appearance as a professor, giving a few lectures at the *Athénée* of Marseilles. In May, 1833, he was chosen to the vacant professorship of French Literature at the Collège de France, a position he held for more than twenty years. It is not necessary to give an exact list of the different countries he visited in his vacations, and his longer absences from Paris ; he was an incessant traveller, fond of hurrying away to remote regions with but brief notice to his friends. He kept Madame Récamier well informed about his doings, and his letters show that his long stay in Germany and the North had brought about the hoped-for result of enabling him to approach her merely as a friend. That he remained until the end of her life. The second volume of his correspondence contains not only many of his letters to her who received many more than any other person, but also those to the friends he formed in his maturer years. Foremost among these was Alexis de Tocqueville, whom he met frequently in the *salon* of Madame Récamier. The friendship of these two men lasted nearly thirty years, until Tocqueville's death, and the memorial of it, in their letters, is charming reading. On Ampère's part it was also kept up by many visits to Tocqueville, where there was always a room ready for him, and on the part of his friend by the most gentle and delicate courtesy and consideration. This quality is more especially noticeable towards the end of Tocqueville's life, when Ampère had formed new ties of friendship which kept him somewhat aloof from his old companion, who never complains or laments his barely perceptible defection, but whose smothered regret is to be read between the lines. The second of the two volumes contains their correspondence in full, and it

is delightful to notice the modest reserve with which both treated their intimate friendship. Their letters are models of real politeness which is as far from rigid formality as from boorishness. However near the two men got to one another, they stood always in an attitude of respect. There is an indefinable air of gentleness and refinement about even their simplest notes which is well worthy of notice. More than this, their correspondence comes down to so late a date that it throws light on many events of what is still contemporaneous history, and the views of a man like Alexis de Tocqueville are full of interest. To the unromantic reader these pages will be the most attractive of the volume. Another of Ampère's friends was Mohl, the Orientalist, a naturalized Frenchman, of German birth, with whom he lived from 1831 to 1847. Mohl's letters, a few of which are in this volume, are especially noticeable for their delightful humor, a quality to be observed also in those of Adrien de Jussieu, and in no others.

Madame Récamier remained, however, his chief friend until her death, in 1849. When she was an old woman Ampère was constant in his devotion; when she blind, and Chateaubriand paralytic, were waiting for death to take them, Ampère visited them every day and made it his duty to entertain them. The end of her life was sad. A cataract was forming over her eyes, which an operation removed. Before they were able to endure the light, she found out that Ballanche was ill,—what they had tried to keep from her,—and removing the bandage from her eyes she went to his bedside to console him in his last illness. He died holding her hand in his. Her eyesight was irrecoverably lost. She died of the cholera, May 11, 1849.

André died in 1836, keeping busily at work until the end. His last years were made pleasant to him by the kindness of his son, although he had a great deal of unhappiness from the sad fate of his daughter, whose marriage was unhappy.

Jean-Jacques, after the death of Madame Récamier, lived much in Rome; indeed, that city became a sort of second home to him, thanks to the kindness of the lady who has edited these volumes of his correspondence. He busied himself in many branches of literary work of which this is not the

time to speak. He died at Pau, in the morning of March 27, 1864.

In this brief sketch of parts of the lives of these two men more space has been devoted to the mention of what happened to them than to the enumeration of their virtues and attractive qualities, but it is these which are really more important and which give the volumes their rare worth. The two Ampères had a genius for friendship, and outside of the many romantic incidents of their lives lay their firm attachment to their many friends. The elder Ampère was for the greater part of his life separated from his Lyons acquaintances, so that almost his only communication with them was by letters, hence his correspondence is very full; and as for the younger, his frequent journeys had the same result. Both of them wrote frankly and often, so that we have an almost continuous record of their lives; the breaks in their correspondence being supplied by the editor of the volumes, and by notes made by Jean-Jacques. We get a most intimate knowledge of both men,—the father, honest, enthusiastic, blunt, hard-working, generous; the son, with all those qualities, perhaps, except bluntness, but with as intricate and complex a nature as his father's was transparent. It would be hard to find in literature any correspondence throwing more light on the character of the writers. We are taken at once into their daily lives, we share their joys and sorrows, we learn more of human nature, and we form a great affection for the two men whom we first learn to sympathize with. The book deserves to stand on the same shelf with the best of biographies; it will repay constant study, and there is no one who will not feel himself the better for the frank intercourse the letters permit with two upright, able, and attractive men.

T. S. PERRY.

ART. IV.—*Memoirs of General William T. Sherman.* By Himself. In Two Volumes. New York: D. Appleton and Company. 1875.

THE appearance, within a few months of each other, of two books so noteworthy as General Sherman's Memoirs and General Joe Johnston's Narrative of Military Operations, revives the interest in the history of our civil war which time and the pressure of the many cares of our intense and nervous American life had perceptibly deadened. There is a peculiar fitness in their appearing as they do. Their authors, opposed to each other at Bull Run, the first considerable battle of the war, were opposed to each other as commanders-in-chief in the arduous campaign which carried the Union army forward to Atlanta, and at the end of the war it was to Sherman that Johnston surrendered his forces. The two books are valuable separately, and more than doubly valuable taken together, for they go far towards enabling us to understand some very interesting operations of which comparatively little was known before, and that little almost altogether from one side.

We have had fuller means of knowledge of the operations of the Eastern armies than of the Western, and our accounts of the Georgia campaign of 1864 have been especially imperfect. General Sherman's and General Johnston's books go far towards supplying the want; and, as these books are provoking lively criticism and copious reply, it seems probable that we shall soon have the means of knowing all that needs be known about the matters of which they treat. Not to mention the numerous newspaper articles which are appearing, especially in Southern papers, it is announced that General Hood, who succeeded General Johnston in the command of what was then known as the Army and Department of Tennessee, is preparing a formal reply to his Narrative, so far as it concerns him. When that is published, and the government has given us the original reports of officers on both sides, now in the possession of the War Department and understood to be in process of

arrangement for publication, there will be no lack of material for the coming Napier to work with. In the mean time, the curious student may find much interesting and instructive employment in analyzing and comparing the accounts which Sherman and Johnston have given us of the great operations which they conducted against each other.

There is a marked contrast in the tone of these two books. Each is the work of a man of ability, and of a man conscious of his own ability ; but Sherman writes with the cheerfulness of success, and Johnston with the depression of disappointment and failure. The latter was not only on the losing side, and obliged to work with the limited material of the Confederacy, but he seems to have been out of favor with President Davis from the beginning of the war, and assigned to the duty of resisting powerful armies with forces inferior in quality, number, and supplies to those which were given to Lee. We know less of his personality than we do of Sherman's; but it seems probable that he is wanting in the nervous activity, the confidence, the cheerfulness, and irrepressibility which the letters, speeches, personal bearing, and whole career of the latter have shown him to possess. Sherman saw dark days in the war, but he lived to see the time when he had the full confidence of his civil and military superiors ; when troops and supplies in abundance were placed at his disposal, and when he was given almost unlimited control of the plans to the prosecution of which he proposed to devote his forces. But we must pass from such comparison to an examination of the contents of the two volumes before us.

The author dedicates them to "His Comrades in Arms, Volunteers and Regulars," and accounts for "his departing from the usage of military men, who seldom attempt to publish their own deeds," by the statement of his wish that what he offers, "not designed as a history of the war, or even as a complete account of all the incidents in which the writer bore a part, but merely his recollection of events, corrected by a reference to his own memoranda, which may assist the future historian when he comes to describe the whole, and account for the motives and reasons which influenced some of the actors in the grand drama of war," may "prove interesting to

the survivors, who have manifested so often their intense love of the ‘cause’ which moved a nation to vindicate its own authority; and, equally so, to the rising generation, who therefrom may learn that a country and government such as ours are worth fighting for, and dying for, if need be.” The general public, as well as the student, may be glad of this departure from the usage of military men, for we owe to it two very interesting as well as very valuable volumes. Indeed, we see no sufficient reason why such a usage should prevail among military men, provided they have accomplished anything worth describing, and have the capacity of telling their own story. But, however that may be, General Sherman has written his Memoirs and has published them, and, as he is a good writer as well as a successful soldier, he has placed his fellow-citizens under a fresh obligation to him.

The style of a book like this is a matter of secondary importance. The author makes no attempt to attain high finish; but, though his English is sometimes queer, and he never hesitates to use colloquial expressions, he is always clear, rapid, and interesting. There is hardly a sentence in these volumes that leaves one in any more doubt as to its meaning, than those to whom his tart letters have been addressed from time to time must have experienced in reading them. His language is sometimes picturesquely simple, as when he describes the departure of the army from Atlanta, and when he says that at the grand review, “For six hours and a half that strong tread of the Army of the West resounded along Pennsylvania Avenue.” He either never feels or never yields to the temptation to indulge in sentimentality. He is sometimes, but not too often, humorous, and he never goes out of his way to be so. Indeed, his book is as straightforward and business-like as a book can be; although as anecdotes connected with his story occur to him, he tells them very entertainingly. His descriptions of battles are not remarkable; but of Sherman as a fighter of battles, as distinguished from the planner and manager of great operations, we propose to speak at more length hereafter.

Earnest and determined as Sherman was in fighting and putting down the Rebellion, it appears that he was by no means eager to take up arms for the North at the beginning; but no

one seems to have surpassed him, if any one equalled him, in the clearness with which he foresaw and the accuracy with which he estimated the magnitude of the struggle. One of the sharpest trials of his life was owing to this very fact of his being in advance of his time. His statement to the Secretary of War, in October, 1861, that, in his judgment, two hundred thousand men would be needed for offensive operations on the central line before the work was done, was imprudently communicated to newspaper reporters, and by them, if not by the Secretary himself, so used that he was very generally and for some time believed by the public to be insane. This cruel imputation was keenly felt by Sherman, as is shown by the space which he devotes to the matter in his first volume.

There is nothing in these volumes with which the reader is more strongly impressed than with the fact that Sherman possesses the gift of good sense in the very highest degree, and that he always has his wits about him and his eyes open. At Bull Run,—his first battle,—before he received his orders to cross the run, he saw a horseman, presumably a Southerner, though he does not say so, cross the stream. Inferring that where one went more might go, he sent forward a company to try the ford, and followed with his whole brigade. By similar sense and use of his own eyes, he found a way for General Blair's division to cross the Big Black in 1863. It was by the possession and use of just such faculties, by seeing for himself and deciding for himself, that Wellington was enabled to make his famous passage of the Douro. General Sherman was one of the first to see that, so long as the war lasted, all on the other side were enemies, and he never for a moment lost sight of this truth, or failed to shape his action accordingly. He gave a signal example of this clear perception, and of the determination with which he acted upon it, when, after the capture of Atlanta, he ordered the removal of the inhabitants of that city, in order to make it "a pure military garrison or depot, with no civil population to influence military measures," and enforced the execution of the order with absolute disregard of the outcry which it raised, and the protests which it called forth. There seems no good reason, nor, indeed, any reason, for charging him with inhumanity, but he went *droit au but*. In common phrase, there

was no nonsense about him. He did not hesitate, when he had torn up a railroad and ruined the rails by fire and twisting, to fill up cuts with trees, brush, and earth, and "commingle with them loaded shells so arranged that they would explode on an attempt to haul out the bushes"; and yet he pronounced it "not war but murder" when he found a great shell planted in the road over which his column passed, and which exploded when it was trodden on. There is a distinction between the two cases, but it is a nice one; and, though his keen eyes probably saw it clearly, it was rather too nice, and we would rather not have found that he set the example of such modes of warfare. His cordial response to Halleck's suggestion that he should destroy Charleston and sow salt upon its site is the most savage and the only really savage thing that we recall in his two volumes; but it was written in 1864, and the mildest of us did not love Charleston then. He states with emphasis that the burning of Columbia was accidental, and, in his judgment, began with the cotton which General Hampton's men had set fire to on leaving the city. His army seems to have striven hard to put out the fire, but it does not appear that he exerted himself personally in the matter.

A striking illustration of his coolness at a time when we were most of us full of that enthusiasm which, as a witty lampooner of the period said, swelled the head as well as the heart, is afforded by a story which he tells in his first volume. Soon after the first Bull Run, in July, 1861, Mr. Lincoln came out to his camp, and proposed to speak to the men. "I asked him to please discourage all cheering, noise, or any sort of confusion; that we had had enough of it before Bull Run to ruin any set of men; and that what we needed were cool, thoughtful, hard-fighting soldiers,—no more hurrahing, no more humbug."

Most of the terms of praise which are applicable to men of thought and action are applicable to him. He was both careful and quick in making up his mind, and absolutely unswerving in his progress to his goal, or, rather, absolutely unswerving in his determination to reach his goal. He was ready to see and to acknowledge the importance of obstacles which he had not foreseen or which he had not justly estimated, and

prompt and fertile in the adoption of his action to the altered circumstances of each case, but he never lost sight of his object, or failed to press forward to it as swiftly and forcefully as he could. His book is full of evidences of his determination and his wisdom, his promptness and his energy. The same qualities that made him prompt and efficient, when a lieutenant of artillery in California before 1850, in displacing one Alcalde and installing another and settling affairs in Sonoma, made him prompt and efficient in Virginia in 1861 in bringing to his senses an officer of three-months troops whose term had expired, and who proposed to go home at once without waiting for leave or to be mustered out. On another occasion, also, early in his career in California, he showed the same remarkable pluck and ready-witted skill, in his arrest of a large party of deserters from the Regular Army. He showed his prompt resource in Alabama, in 1863, when two of the clerks at head-quarters were caught by guerillas, and, when last seen, were tied to the tail-board of a wagon, and driven rapidly away. As soon as he learned the fact, he sent for three or four of the principal men of the neighboring town of Florence, told them what had taken place, and demanded the immediate restoration of the captives. The gentlemen so arrested disclaimed all knowledge and all responsibility; but Sherman told them that these guerillas were their own sons and neighbors, that they knew their haunts, etc., and that if the restoration did not take place within twenty-four hours, he would strip them of their hats and coats, and tie them to the tail-boards of his wagons till the captives were produced. They sent off messengers at once, and the missing ones were brought back the next day. Many commanders have failed because they would see lions in their path. Sherman, on the contrary, fixes his eyes on the thing he proposes to do, and goes over or through or, at the worst, round the obstacle, whatever it may be. "Where there's a will, there's a way." Sherman had the will in plenty, and seldom failed to find the way. When he was planning his northward march from Savannah, and "the question of supplies remained still the one of vital importance," he reasoned that "if the worst came to the worst, we could live several months on the mules and horses of our trains." This

single simple sentence shows the radical difference between the man and so many of our doubting, balancing, council-of-war-calling generals, on both sides, who could not move for want of this store or that supply, or because they feared for their line of communications. He showed his determination in quite a different, but not less striking way, and that was in his assignments to command. Soldiers know that there are few harder things to do than to displace a really deserving officer because a better officer is within reach, and the good of the service seems to demand not only a worthy officer but the very best one that can be had. General Sherman seems never to have shrunk from the performance of this duty. After the death of McPherson before Atlanta, it became necessary to settle the important question who should succeed him.

"General Logan had taken command of the Army of the Tennessee, by virtue of his seniority, and had done well; but I did not consider him equal to the command of three corps. Between him and General Blair there existed a natural rivalry. Both were men of great courage and talent, but were politicians by nature and experience, and it may be that for this reason they were mistrusted by Regular officers like Generals Thomas, Schofield, and myself. It was all-important that there should exist a perfect understanding among the army commanders, and at a conference with General Thomas we discussed fully the merits and qualities of every officer of high rank in the army, and finally settled on General Howard as the best officer who was present and available for the purpose. . . . I wanted to succeed in taking Atlanta, and needed commanders who were purely and technically soldiers, men who would obey orders, and execute them promptly and on time; for I knew that we would have to execute some most delicate manœuvres, requiring the utmost skill, nicety, and precision. I believed that General Howard would do all these faithfully and well, and I think the result has justified my choice. I regarded both Generals Logan and Blair as 'volunteers' that looked to personal fame and glory as auxiliary and secondary to their political ambition, and not as professional soldiers."

Again, when he reached Newbern, in 1865, he —

"asked for General Mower to command the Twentieth Corps, because I regarded him as one of the boldest and best fighting generals in the whole army. His predecessor, General Williams, the senior division

commander present, had commanded the corps well from Atlanta to Goldsboro, and it may have seemed unjust to replace him at that precise moment, but I was resolved to be prepared for a most desperate, and, as then expected, a final battle, should it fall on me."

But if Sherman was decided in changing the rank of officers under him, he seems to have fully understood and practised the duty of subordination in his own case, and to have done what he could to cause others to do the same, and, generally, to promote harmony in the service. When Thomas was put over him after Shiloh, he says, "We were classmates, intimately acquainted, had served together before in the old army, and in Kentucky, and it made to us little difference who commanded the other, provided the good cause prevailed." When Porter and McCleernand were moving together upon Arkansas Post in January, 1863, he noticed that Porter's manner to the latter was extremely curt, and asked him what he meant by it. Porter said that he did not like him,—that he had taken a strong prejudice against him. Sherman "begged him, for the sake of harmony, to waive that," and Porter promised to do it. This occurred just after the intriguing McCleernand had arrived to supersede Sherman in the command of the expeditionary force on the Mississippi, under orders from the War Department. It appears to have been mainly, if not altogether, owing to him that Grant gave up going to the rear on leave, when Halleck superseded him, after Shiloh. Grant told Sherman that he had resolved to do so. The consequences to him might have been most serious, if not fatal, but for Sherman's strenuous advice. When he reached Savannah, after all his successes in Georgia, and his great fame was secured, he showed the most cheerful readiness to abandon his carefully considered plan of further operations, in obedience to the orders of Grant, who was separated from him by two hostile States. That he did not attempt to disguise his personal feelings at the shameful treatment which he received from Stanton at the close of the war, is true; but we know of no ground for even suspecting him of having allowed his resentment to influence his official action.

General Sherman is unquestionably a very natural man. He is capable of intense wrath, but there is great kindness

and cordiality in his manner, and an entire absence of reserve, formality, and what we call conventionality, and his Memoirs satisfy the reader that he is the sort of man he appears to be. There is no self-praise in them, though he does not hesitate to speak well of his own action when he sees occasion. He says very simply, when he learns of his commission as a major-general in the Regular Army, that it was unexpected, and not desired till he was successful in the capture of Atlanta. Of his general orders for the March to the Sea he says, "They appear to me, even at this late day, so clear, emphatic, and well digested, that no account of that historic event is perfect without them, and I give them entire." He is very plain-spoken, as he showed in his interview with General Johnston, after he had heard of the assassination of Lincoln, when he told him, "I could not believe that he or General Lee, or the officers of the Confederate Army, could possibly be privy to acts of assassination, but I would not say as much for Jeff Davis, George Sanders, and men of that stripe." His manly letter to Mr. Stanton, written on the 25th of April, 1865, in which he tells him that he still believes the general government of the United States has made a mistake, is another example. When Halleck telegraphed him in May, 1865, "professing great friendship, and inviting me to accept his hospitality at Richmond," he answered that he "had seen his despatch to Mr. Stanton, of April 26th, embraced in the second bulletin, which I regarded as insulting, declined his hospitality, and added that I preferred we should not meet as I passed through Richmond." Like a true soldier, and unlike Halleck, or, if he was not to blame, unlike the Secretary of War, who used the newspapers to publish to the world cruel attacks upon a great soldier in the hour of his triumph, he sent this message by a cipher-despatch.

He is very candid. In describing his feelings and actions in the early part of 1861, he says, "I thought, and may have said, that the national crisis had been brought about by the politicians, and, as it was upon us, they 'might fight it out'"; and he records yet stronger language in the same direction, used to his brother in Washington in March of the same year. He frankly confesses that he made a tactical error when oppos-

ing Johnston at Bentonville in March, 1865. He does not hesitate to place on record a fact that many men would have omitted to mention,—that when his company was near St. Louis, before the war, he was permitted, on application, as there was cholera there, to delay joining till September.

He showed the wise thoughtfulness which often increases the chances of success in war in his instructions to division commanders, issued before the attack on Haines's Bluff, in December, 1862, in which he says:—

“The detailed manner of accomplishing all these results will be communicated in due season, and these general points are only made known at this time, that commanders may study the maps, and also that in the event of non-receipt of orders all may act in perfect concert by following the general movement, unless specially detached.”

His possession of what may be called strategic sense is illustrated by a paragraph in relation to the departure from Atlanta.

“It surely was a strange event,—two hostile armies marching in opposite directions, each in the full belief that it was achieving a final and conclusive result in a great war; and I was strongly inspired with the feeling that the movement on our part was a direct attack upon the Rebel army and the Rebel capital at Richmond, though a full thousand miles of hostile country intervened, and that, for better or worse, it would end the war.”

The country knows so well what admirable letters Sherman writes, that it will be good news for those who have not seen these volumes to be told that he has introduced his correspondence into them very freely. His official letters and reports are also constantly reproduced, and it is unnecessary to say that they are of the very greatest interest and value. Some of his letters, other than official letters in the ordinary sense, which have impressed us most, are his letters to General Hood at the time he ordered the abandonment of Atlanta by its inhabitants; to the Mayor of Memphis, written in July, 1862; and to the editor of the “Union Appeal” and the “Bulletin,” both of Memphis, at about the same time; and his most feeling letter, written after the death of Willie, “of all his children the most precious,” to the officer commanding Battalion Thirteenth United States Infantry, in which “Willie

was, or thought he was, a sergeant." In this connection it may be remarked that no one could see more distinctly than Sherman the mischief wrought by the press in war. His stern warnings to Southern editors in places under his control, and his wise remarks in his closing chapter on the evils inseparable from the presence with troops of newspaper correspondents, will command the approval of every thoughtful reader as well as of every soldier. He adds to the latter passage, with the judicious moderation which is seldom wanting in him: " Yet, so greedy are the people at large for war news, that it is doubtful whether any army commander can exclude all reporters, without bringing down on himself a clamor that may imperil his own safety. Time and moderation must bring a just solution to this modern difficulty."

The question whether this book has been published too soon has been much discussed. It seems to be one upon which every reader must form his own opinion. It certainly has not been common for men so highly placed as General Sherman to give to the world their memoirs so soon after the great events which they describe, and in the lifetime of so many of the men who were prominent in their connection with those events. For our own part, the custom of holding back a great man's memoirs seems to belong to the class of those which are more honored in the breach than in the observance. A timid man will stay his hand from motives of prudence; a man who does not like controversy, for fear of disturbance; a very considerate man, for fear of giving pain. If the book is worth publishing, it is likely to be best worth it when the interest in its subject is fresh. So far as it is accurate, it adds to the stock of valuable information. So far as it is inaccurate or incomplete, it has the best chance of having its errors corrected and its wants supplied, if it is published early, while living men can draw on their memories. A great soldier's memoirs are not likely to contain much that will give needless pain. Scandal and gossip must be sought elsewhere. As for the books before us and their author, General Sherman certainly is not timid, nor averse to controversy, whether with the pen or with the sword; and as for the spirit of his book, it seems to us that no charge of want of consideration for the

feelings of others can fairly be brought against it. We have heard him ask, with every appearance of the liveliest and most genuine interest, whether one who was reading his book found any malice in it, and assert with the most emphatic utterance that if there were any, he was unconscious of it. For ourselves, we are able to say that a good degree of familiarity with its contents disposes us to agree cordially with him in this view. He blames freely, as he praises freely, but he seldom if ever fails to give a reason for his blame, and his reasons are such as very generally to command the assent of the reader, and he very rarely attributes unworthy motives for any action which he disapproves. With these remarks, and a quotation from the book itself, touching the question raised, we propose to leave the reader to form his own opinion:—

“I have again and again been invited to write a history of the war, or to record for publication my personal recollections of it, with large offers of money therefor; all of which I have heretofore declined, because the truth is not always palatable, and should not always be told. Many of the actors in the grand drama still live, and they and their friends are quick to controversy, which should be avoided. The great end of peace has been attained, with little or no change in our form of government, and the duty of all good men is to allow the passions of that period to subside, that we may direct our physical and mental labor to repair the waste of war, and to engage in the greater task of continuing our hitherto wonderful national development.

“What I now propose to do is merely to group some of my personal recollections about the historic persons and events of the day, prepared, not with any view to their publication, but rather for preservation till I am gone, and then to be allowed to follow into oblivion the cords of similar papers, or to be used by some historian who may need them by way of illustration.”—I. 176.

He begins his book with the statement, “In the spring of 1846 I was a first lieutenant of Company G, Third Artillery, stationed at Fort Moultrie, South Carolina.” He does not tell us anything of his earlier life, except incidentally. It is well enough to mention, therefore, that he was born at Lancaster, in the State of Ohio, in February, 1820, and so was twenty-six years old at the period at which his *Memoirs* commence. Con-

siderably more than a third of the first volume is given to his recollections of the fifteen following years, the greater part of which he passed in California and the rest in Missouri, New York, Kansas, and Louisiana. He played many parts in these years. He was by turns soldier, banker, and superintendent of the "Louisiana Seminary of Learning and Military Academy," and circumstances led to his being a good deal of a traveller. The story of this period is most agreeable and interesting. He arrived in California before the discovery of gold, and when the country was very thinly settled. He saw the gold fever break out and rage, and he not only was there while the Vigilance Committee held sway, but he seems to have come very near to putting down that powerful organization, and to have only failed because General Wool did not adhere to his promise to furnish him with arms. His account of this affair suggests a question upon which we shall have more to say hereafter, and that is, how far he possesses the precious talent of being able to keep other men up to their work. But to matters such as these, however readable the accounts of them may be, the Livian phrases apply, "Legentium plerisque, primæ origines proximaque originibus minus præbitura voluptatis, festinantibus ad hæc nova"; and it is sufficient to say here, that his Memoirs show that during all these years of his early manhood he possessed and displayed, so far as circumstances permitted, the same qualities that afterwards made him the famous man he is.

The outbreak of the war found him a husband and father, but about as poor in pocket as he was when he began life; and one rubs his eyes when he reads that the Sherman who went "marching through Georgia," the General of the Army of the United States, was the president of a street railroad in St. Louis when the Rebel batteries were firing on Sumter, and did not resign his place till a month after Anderson had saluted his flag and left his fort with the honors of war.

Before leaving this earlier and less conspicuous portion of his career, it may be well to state that he takes some pains to meet what seems to us the very absurd charge that he was guilty of a breech of hospitality in taking up arms against the South, and disposes of the charge in the most conclusive manner. Our

Southern brethren had a way of thinking that whatever they did not like was wrong, but among their many wrong-headed notions a high place is due to their idea that because a Northern officer of instruction and government had received a salary for services rendered them in time of peace and of loyalty to the Union, he must, therefore, stand idly by when they sought to break up that Union by force of arms.

On the 14th of May, 1861, he was appointed colonel of the Thirteenth Regular Infantry, and he soon after went to Washington, reported in person to General Scott, took the oath of office, and was assigned to inspection duty, his regiment having then no existence except on paper. On the 30th of June he assumed command of a brigade in Hunter's Second Division of McDowell's army, then organizing before Washington. He says that he had reason to believe that he had one of the best brigades in the whole army, composed of "good, strong volunteer regiments, pretty well commanded," and having attached to it Ayres's battery of the Fifth Artillery. On the 21st day of July following, he commanded his brigade in the battle of Bull Run. Three weeks is short time in which to make a brigadier, even out of a West Point graduate, especially without previous experience in any higher position than that of a line officer. General Sherman seems to have kept his head cool, as usual, and to have done his best to use his men with effect in the action; but his own account of it confirms the impression which we have formed from other accounts, that he displayed no tactical skill, none of the genius of war, in this engagement. Bull Run, one of the best planned battles of the war, as he says, was, as he also says, one of the worst fought, and the interest that attaches to it belongs to its consequences and not to its incidents. We seem to see in his own statement that his "regiments came into action well, but successively," an early indication of something wanting in his mental composition which goes far towards explaining why the great soldier never won a great battle.

Before the end of the summer he was assigned to duty in the Department of the Cumberland, Brigadier-General Robert Anderson commanding, and remained on duty in Kentucky for the greater part of the three following months. It was

during this time that he had the interview with Mr. Cameron, then Secretary of War, in which he made the statements which led to the story of his insanity.

About the middle of November, 1861, he was transferred to the Department of Missouri, and ordered to report in person to General Halleck at St. Louis. The following winter was one of busy preparation, and in the month of February, 1862, General Grant received the surrender of Fort Henry and Fort Donelson, and in March following General Curtis defeated the Rebels at Pea Ridge. General Sherman had no connection with operations in the field at this time; but on the 10th of March, 1862, he embarked at Paducah a division which he had been forming out of the new troops arriving there, and of which General Halleck gave him the command. It was a division of four brigades, composed of regiments of volunteer infantry from Ohio and Illinois, and of one volunteer battery from Indiana. After some movements on the Tennessee River, he was ordered to disembark his division at Pittsburg Landing, and to take position well back. Pittsburg Landing is the usual landing-place for the people about Corinth. At Corinth, the Memphis and Charleston Railroad and the Mobile and Ohio, the great Northern road from Mobile to Columbus, just below the confluence of the Ohio and Mississippi, intersect each other. Corinth is in the northeastern corner of Mississippi, and about twenty miles distant from Pittsburg Landing, which is just over the Tennessee line. The distance by road between the two places is considerably greater. Captain Gwin of the navy told General Sherman it was thirty miles. It was General Halleck's intention to move out in force, and make a lodgment on the Memphis and Charleston Railroad. General C. F. Smith was in charge of the expedition, but he soon became extremely ill, and was relieved, on the 17th of March, by General Grant. On the 19th of March, after a careful reconnaissance of the ground for ten miles out on the road to Corinth, Sherman disembarked his division, and took post about three miles back from the landing, on ground from which he was driven on the 6th of April, the first day of the battle of Shiloh. It is difficult to believe that he was not surprised in this action. It appears from his own account that

of the five divisions which formed the army which Grant commanded at Shiloh, Prentiss's was on his left, Hurlbut's was a mile and a half to his left rear, and McCleernand's and W. H. L. Wallace's to the rear of himself and Prentiss, at a distance not stated. He had learned from the country people three weeks before "that trains were bringing large masses of men from every direction into Corinth"; he "was only responsible for his own division"; he had made himself "familiar with all the ground inside and outside" his lines; he knew that Snake Creek and Lick Creek with their confluent narrowed the space over which the Union Army could be attacked to about a mile and a half or two miles; that the Rebel cavalry in his front was "getting bolder and more saucy," and that they had artillery with them, if not infantry; and, finally, he knew that he, or he and Prentiss, held the advanced position, and yet his original report shows that early on the morning of that memorable Sunday, "the enemy drove our advance-guard back on the main body, when I ordered under arms all my division." His recollections, as stated in the text, are rather more favorable than his report, but even there he states that when the picket firing led him to ride along his lines, he received, when riding along the front of one of his own regiments, at a distance of four hundred yards, a volley which killed his orderly. Nothing seems to indicate that he derived any advantage from timely occupation of the ground, which he says "admits of easy defence by a small command." There does not appear to be any good reason for being proud of this battle. Buell's arrival turned the defeat into a victory, but the Rebel attack caused Grant a loss of ten thousand men from his thirty-two thousand, of which the loss in Sherman's division, one of the five, was just his due proportion, that is to say, a fifth and a score over. As for the army, Sherman's own estimate to Buell at the close of the day was that Grant "ought to have eighteen thousand men fit for battle." As for the commander, Lew. Wallace's division was left as useless all day as D'Erlon's corps on the day of Ligny. As for the character of the troops, all of Sherman's were perfectly new, and many of the rest were probably not much better. It does not appear unjust to Sherman to sum up the story of this battle

by saying that he showed determination and hopefulness, but otherwise did nothing to entitle him to much praise, or to raise brilliant expectations of his future.

Till near the close of the year 1862, there was nothing salient in Sherman's career. He was promoted to the rank of major-general of volunteers, and he fell under the immediate command of General Grant, under which he continued, at least nominally, till the end of the war; but he was not, during the period named, connected with any affair which deserved the name of a battle. On or about the 12th of December, 1862, he assumed command of an expeditionary force of four divisions, designed to move down the Mississippi in co-operation with Admiral Porter's fleet, and to attempt the surprise of Vicksburg. He placed his forces on some ground which was separated only by a bayou from the bluffs of Vicksburg, and at about noon of the 29th day of December he gave the orders and signal for the main attack. It was made near the head of Chickasaw Bayou, and upon some heights known as Haines's Bluffs, and failed, with a loss of close upon two thousand men, of whom one hundred and seventy-five were killed. General Sherman says that he has "always felt that it was due to the failure of General G. W. Morgan to obey his orders, or to fulfil his promise made in person"; that is, to lead his division in person. He does not give many details, but the account he gives makes this explanation plausible. Soon after, General McClernand arrived, with orders from the War Department to command the expeditionary force on the Mississippi River. He was appointed to this command by President Lincoln in person, who, Sherman says, had then no knowledge of this repulse. He adds: "My relief, on the heels of a failure, raised the usual cry at the North of 'repulse, failure, and bungling.' There was no bungling on my part, for I never worked harder or with more intensity of purpose in my life; and General Grant, long after, in his report of the operations of the siege of Vicksburg, gave us all full credit for the skill of the movement, and described the almost impregnable nature of the ground."

Under General McClernand, General Sherman was present at the rather easy capture of Arkansas Post, in January, 1863, as commander of the Second Corps of the Army of the Missis-

sippi. The aggregate loss of the corps in that operation was five hundred and nineteen.

During the first six months of 1863, General Sherman was engaged, as commander of the Fifteenth Army Corps, in the series of difficult and laborious operations conducted by General Grant, which resulted in the surrender of Vicksburg on the 4th of July in that year. He seems to have done well whatever he had to do, but it so happened that he was not present at any of the very considerable battles which forced Pemberton's army into Vicksburg and separated him finally from General Joe Johnston's forces. The battles of Port Gibson, of Raymond, and of Champion Hills were fought and won without him. In the line of investment, his corps had the right. It took part in the general assaults of May 19 and May 22, and shared in the general repulse. He was rewarded for his share in the general success of the campaign by the commission of brigadier-general in the Regular Army. So far as we know the part he played in the operations of these six months, in which, it is to be remembered, he was not at any time the chief commander, he seems to have been always an excellent, trustworthy soldier, but not to have exhibited any exceptional or brilliant qualities.

The last six months of the year 1863 were made memorable by the great victory gained by Grant over Bragg at Chattanooga on the 25th of November. They were made memorable for Sherman personally by the loss of his favorite son Willie, who died at Memphis on the 3d of October. At about the end of that month, he was assigned to the command of the Department and Army of the Tennessee, the latter of which was made up of the Fifteenth, Sixteenth, and Seventeenth Army Corps. Circumstances made it necessary for General Grant to call him to Chattanooga in great haste, with a portion of his troops, in a short time after. In the great battle of Chattanooga, he led four divisions to attack the right flank of Bragg. Our impression has always been that his success in this undertaking was not signal. He met with stubborn resistance, and gained little ground, but he undoubtedly caused Bragg to detach heavily from his centre to the threatened flank, and so contributed largely to the magnificent success of the attack of Thomas upon

Missionary Ridge. He reports his loss at about two thousand, which seems small for so large a force, attacking an enemy in a strong position and fighting from sunrise till late in the afternoon. "Column after column of the enemy was streaming towards me; gun after gun poured its concentric shot on us from every hill and spur that gave a view of any part of the ground held by us." Either the Southerners did not shoot as straight that day as they usually did, or Sherman's attack was not pressed close.

The principal events of the first three months of 1863 were the useful but uneventful Meridian campaign, the object of which "was to strike the roads inland, so to paralyze the Rebel forces that we could take from the defence of the Mississippi River the equivalent of a corps of twenty thousand men, to be used in the next Georgia campaign." This part of the enterprise was successful, but the connected enterprise of attempting to destroy General Forest, the execution of which was intrusted to General Sooy Smith and a strong force of seven thousand selected cavalry, failed utterly, because, General Sherman says, General Smith did not fulfil his orders, which were clear and specific, both by letter of instructions and by personal explanations. In March of this year, Sherman received from Grant, then going to Washington to receive the commission of lieutenant-general, the admirable letter of gratitude and thanks with which the public is familiar. On the 18th of the same month, Sherman succeeded Grant in command of the Military Division of the Mississippi, embracing the departments of the Ohio, the Cumberland, the Tennessee, and Arkansas. From this time on, he was virtually an independent commander. He had no superior nearer than Washington, and only the President and General Grant there. The seven weeks following were employed by him in active preparation for the Georgia campaign, in which he proposed to use the Army of the Cumberland, commanded by General Thomas, the Army of the Tennessee, commanded by General McPherson, and the Army of the Ohio, commanded by General Schofield, amounting together to a hundred thousand men and two hundred and fifty guns, besides some ten thousand or more cavalry. On the 5th of May, "the very day appointed by General Grant from his headquarters in

Virginia, the great campaign was begun." Its general purpose was to do the utmost possible damage to the Western Army of the Confederacy, commanded, since the defeat of Bragg at Chattanooga, by General Joe Johnston, and to keep him and his forces so fully employed that Lee, in Virginia, should be unable to draw any supplies of men or munitions from that quarter.

The next four months were the most momentous and interesting of Sherman's military career. He was, for the first time, a commander-in-chief. The general plan of operations having been settled and approved, he was left his own master. He had a large and good army, with most excellent commanders, and admirably equipped and supplied. Everything that foresight and industry could do to insure success had been thoroughly done by him, and he bestowed the most watchful and untiring care upon the conduct of the campaign. He had opposed to him one of the very best generals of the Confederacy, with good, but not the very best, corps commanders under him. He estimated the opposing force as half the size of his own. General Johnston calls it only one third, and a careful comparison of the figures of the two generals leads to the belief that the latter's estimate was nearer the truth. We believe Johnston to have been fairer in his statements of numbers than most of the prominent Southern officers. However the two armies may have compared numerically, Sherman's was undoubtedly much the stronger relatively, from its superiority in equipment and supply. Moreover, if his troops were not better, as we believe they were, they were cheered by the consciousness of success. The great victory of Chattanooga had encouraged the Union Army of the West, and the beaten Confederate Army appears to have been more than proportionately depressed by it.

Sherman moved forward steadily but slowly, for his adversary was able and wary, the country was difficult, he himself made it a principle to avoid the attack of fortified lines, if possible, and both armies had learned to fortify their positions as soon as they took them up. The mistake the Federals made at Shiloh was not repeated in these latter days. Finally, he depended for supplies for his great army upon the single line of

railroad to the rear, therefore he could not go far from it, and he had to protect every mile of it as he went forward. The fighting was continuous, almost daily, for the greater part of these four months. Position after position was made untenable for the enemy by his resistless advance. At last, at Kenesaw, after doing everything in his power to dislodge the enemy from his strong position, he found himself compelled, as he thought, to assault; but he was repulsed, with a loss of twenty-five hundred men. He then resolved upon a turning movement on a grand scale, but it had hardly begun before Johnston detected it and evacuated Kenesaw. The story does not make it clear why Sherman might not have resorted to this manœuvre as well before the assault as after; and our impression, formed long ago, that the assault was an error, is confirmed rather than weakened by his account. He was sharply attacked near Peach-Tree Creek, before Atlanta, but he repulsed the attack with heavy loss to the assailants. About the 18th of July, Hood was placed in command of the Confederate Army, and he signalized his accession to the place by two desperate attacks on Sherman's forces,—on the left of the Union line on the 22d of July, and on the right of it on the 28th. He was obliged, in each case, to retire into Atlanta, but he inflicted very heavy loss upon the Union Army in each engagement, and in the former he killed McPherson, one of the very best generals on the Union side.

On or about the 16th of August, Hood committed the fatal error of sending away all of his cavalry to raid upon our railroads. Sherman never lost sight of his immediate object,—the capture of Atlanta,—and his indefatigable industry had its reward on the 2d of September, 1864. His losses in the entire campaign were about thirty-two thousand killed, wounded, and missing; and he gives the loss of the opposing forces during the same period as about thirty-five thousand.

This most interesting and successful campaign cannot be described in detail within the space at our command. It should be studied in the accounts which the two great commanders have given of it. These accounts tally very closely, which is not surprising, for each commander is a man of sense, capacity and integrity. Johnston is conspicuous among Southern

officers for his candor, and his readiness to do justice to the soldiers of the North. Moreover, Sherman quotes Johnston's narrative, and thus shows that he has had the means of verifying his own recollections, and correcting them, if necessary, and supplementing them, from his adversary's material.

The points of resemblance and difference between the Virginia and Georgia campaigns of 1864 are so many and so marked, that one is strongly tempted to make the comparison, and, with Sherman's *Memoirs* as a text, to discuss the relative merits of the Eastern and Western armies and their commanders. But when we find that, typical Western man as Sherman is, he never says one word in disparagement, direct or indirect, of Eastern troops and their performances, it seems that it would be ungracious to introduce such a discussion into a review of his *Memoirs*. In this connection, it is well to remind the reader of his promotion of Howard, an Eastern man, to the place made vacant by the death of McPherson, instead of either of those Westerns of the Westerns, Logan and Blair, and to notice the cordial language of his special field orders, announcing to his army the surrender of Lee : "Glory to God and our country, and all honor to our comrades in arms, toward whom we are marching." If he said, as he did, that his army was, in his judgment, the most magnificent army in existence, he had a right to say it ; for he said it, not, like Hooker, before he had led his men to defeat, but after he had led them to victory ; and we of the East may echo his praises, not only with the national pride of Americans, but with a local pride besides, for more than one seventh of his regiments were from the East. And before leaving this matter of the recognition of soldierly merits wherever he found them, it may be remarked, that this great graduate of West Point and soldier of the Regular Army not only sets no limits to his praises of his volunteer rank and file, but says : "At the close of our civil war, lasting four years, some of our best corps and division generals, as well as staff officers, were from civil life."

With the capture of Atlanta we reach the end of the first third of the second volume. What remains is not less interesting, but less important ; for though many months of hard work were still before the armies of the West and of the East,

the Confederacy was becoming every day more obviously a failure. The simultaneous defeat of Lee at Gettysburg and surrender of Vicksburg marked the turning-point of the Rebellion. The Army of Northern Virginia died harder than the Southern armies of the West. Missionary Ridge and Atlanta showed that they were declining in force, if not in valor, and Sherman's sword had little work to do after his army entered Atlanta.

Till near the end of October, he was occupied in the pursuit of Hood, who was aiming to get upon his communications. The principal event of this time, and one full of dramatic interest, was Corse's famous defence of Allatoona. The pursuit was continued until the armies reached the northwestern corner of Georgia, within twenty-five miles of Chattanooga, and then Hood drew off to the Southwest, and Sherman had no more to do with him directly. The pursuit ceased on the arrival of Sherman's army at Gaylesville, between the 21st and 28th of October. At this time, he finally resolved on his future course, "which was to leave Hood to be encountered by General Thomas, while I should carry into full effect the long-contemplated project of marching for the sea-coast, and thence to operate towards Richmond." This is the language of the *Memoirs*. In his despatches of the period he uses more characteristic language, and speaks of his intention to "make Georgia howl," and to move through Georgia, "smashing things to the sea." He seems to us to make it quite clear that he originated this plan. He gives (II. 166) a letter of General Grant, which proves that that was his view in December, 1864; and he asserts that, in his opinion, General Grant has never thought or said that he himself was the projector of the march. Indeed, the documents which he prints seem to show uncontestedly that Thomas, Grant, and Mr. Lincoln all disapproved the plan, or were anxious and fearful as to its wisdom.

He prepared with his usual thoroughness for the execution of his plan. The leading features of his preparation were the assignment to Thomas of a force ample to enable him to take care of Hood, the sending to the rear the immense stores which had accumulated at Atlanta and along the railroad, the destruction of everything in the part of Georgia which he controlled which could be of military use to the enemy, and the

putting his own army into perfect marching order. On the 12th of November, the last trains went to the rear, a bridge was burnt and a telegraph-wire severed, and all communication with the rear ceased forthwith.

The army which made the march to the sea was divided into two wings, the right commanded by General Howard and the left by General Slocum, and composed of the Fifteenth Corps of four divisions, the Fourteenth, Seventeenth, and the Twentieth Corps, each of three divisions, and of Kilpatrick's cavalry. Its strength was a little over sixty thousand men of the three arms,—“able-bodied, experienced soldiers, well armed, well equipped, and provided, as far as human foresight could, with all the essentials of life, strength, and vigorous action.” We do not propose to follow the army in its famous march. Though the story is most interesting, its interest is not strictly military. Much of the fighting force of the Western Army of the South was destroyed, and most of what was left had gone to seek better and find worse fortune in Tennessee. Sherman had organized and trained an army which, then and there, was simply resistless. He says himself that he was never, in all his marching through Georgia from Atlanta, forced to use anything but a skirmish line, and that he regarded the march “as the transfer of a strong army, which had no opponent, and had finished its then work, from the interior to a point on the sea-coast, from which it could achieve other important results.” His clear eyes were not blinded. He saw that there was no difficulty in the execution of his plan, and he speaks very modestly of the whole matter, but the enterprise has impressed powerfully the imagination of the public, and he has, as he deserves to have, great credit for the merit of the conception.

To leave space for a few closing remarks of a general character, we must pass rapidly over the capture of Savannah, the famous “Christmas gift,”—the triumphant march northward through the Carolinas, with the two sharp actions of Averysboro’ and Bentonsville, neither of them general actions, and the latter not well fought by Sherman,—the surrender of Johnston,—and the Grand Review, in which “for six hours and a half that strong tread of the Army of the West resounded along Pennsylvania Avenue.”

The Memoirs close with a chapter on the Military Lessons of the War, which is full of the valuable results of enlightened observation, digested with trained sagacity. It is altogether admirable and instructive, and deserves and will reward the most attentive perusal. One of the most original opinions which it expresses is that sanitary commissions and similar organizations should limit their operations to the hospitals at the rear, and never appear at the front. For this opinion he gives strong reasons, and it is undoubtedly a correct opinion, provided the hospital and ambulance arrangements at the front are what they ought to be. His definition of courage is so good that we reproduce it: "I would define true courage to be a perfect sensibility of the measure of danger, and a mental willingness to incur it, rather than that insensibility to danger of which I have heard far more than I have seen. . . . I would further illustrate my meaning by describing a man of true courage to be one who possesses all his faculties and senses perfectly when serious danger is actually present." He dreaded Washington, and "the influences that poison a political capital," as he shows in a letter written to Grant in March, 1864, in which he says, "For God's sake and for your country's sake, come out of Washington," and in his strong remarks upon the torture to Mr. Lincoln of the suspicions suggested to him by the politicians who surrounded him. He confesses to "a kindly feeling of respect for the negroes," dating from the time of the gold-fever, when he found them faithful and white men faithless; but he did not think it an attitude becoming the North which would permit the Rebels to say that we had to call on their slaves to help us to subdue them. He thought, and truly, that under the system of enlistment we pursued, the enlistment of every black man did not strengthen the army, but took away one white man from the ranks, and he was ashamed of it, as all of us ought to have been.

It is probable that the system of foraging was developed under Sherman to a degree scarcely known before in civilized war. It went so far, that once, when the army approached the South Carolina Railroad, and deployments were in progress in expectation of severe resistance and serious battle, "a parcel

of our foragers, in search of plunder, got ahead and actually captured the road, a line of vital importance to the Rebel government." This reads pleasantly, and all's well that ends well; but it sets one to wondering whether such spontaneous action on the part of troops might not be practically inconsistent with that control of the army as one great machine which is commonly considered essential to success, and whether it does not show a lack of discipline that might have been attended with serious results.

The Memoirs of a man who was closely connected with our war from the beginning to the end, and who held high command for the last eighteen months of it, must necessarily contain some praise and blame; but when the reader has finished the book, and pauses to ask himself how much there is of each, he is surprised to find that there is very little. The truth is, that Sherman's Memoirs, like himself, are very business-like, and he keeps going straight forward. He saw clearly whether work was well done or ill, and he states the facts. He is little given to panegyric, still less to invective. With all the plainness of his disapproval, when he has any to express, he very rarely imputes any unworthy motive. His tribute to Mr. Lincoln is the highest that he pays: "Of all the men I ever met, he seemed to possess more of the elements of greatness, combined with goodness, than any other." There is a story current that General Grant recently said that he had always supposed he had something to do with the campaigns in the West until he read Sherman's book. The story can hardly be true; but, if it is, the remark is curiously unfounded. Sherman says: "The campaign of Vicksburg, in its conception and execution, belonged exclusively to General Grant, not only in the great whole, but in the thousands of its details." As for Chattanooga, Sherman speaks very modestly of the part he played there; and as for the Georgia campaign, it was managed by Sherman alone, after Grant's departure for the East. Of Buell, Halleck, McClemand, and Thomas his mention is sometimes favorable and sometimes not, while even the favorite McPherson, on one occasion, "seems to have been a little timid." Of Dahlgren, Porter, Corse, Hazen, and others of less note, he always speaks highly, while the good opinion he formed of

Howard is a surprise, and that of Kilpatrick an inscrutable enigma to the men who served with those officers in the East. He found Hooker as unsatisfactory a lieutenant as might have been expected, and got rid of him at the first favorable opportunity. He has no praise to bestow on Burnside, and nothing but blame for Rosecrans; and when any of his generals get "bewildered," or do not obey orders or fulfil their promises, or display folly, he does not hesitate to say so. His wrath and indignation at the treatment he received from Mr. Stanton at the time of his negotiations with General Johnston are as hot and fresh as if the events were recent, and we confess we do not wonder. The arrogance and injustice of Mr. Stanton were monstrous and exasperating, and the manner in which he used the press to exhibit to the world the great and victorious soldier in the attitude of a reprimanded subordinate was unendurable. Such conduct should be stigmatized as it deserves wherever it is recorded in history, and we are glad, for our part, that Sherman has not hesitated to say his say upon the subject. We wish we could find reason to be as well satisfied with his mention of Thomas. It is always friendly, but it does not seem to us cordial or enthusiastic to the degree which his magnificent victory at Nashville, the most thoroughly successful battle of the war, deserves.

Sherman's descriptions of battles do not lend his *Memoirs* any peculiar charm. They are very well, and they sometimes contain artistic touches, but they are brief and simple. We look in vain in his pages for the fascination that abounds in Napier, and finds its finest expression in the thrilling account of the battle of Albuera. Indeed, considering the length and severity of the war, and his high rank, he was not present at many pitched battles, and, great and numerous as were his successes, it was not given to the captor of Atlanta and Savannah, to the man who made the march to the sea, and who received the surrender of Johnston, ever to win a great victory. So far as it is in our power to judge, he can never have known the joy of Thomas at Nashville, of Sheridan at Cedar Creek and Fisher's Hill, of Lee at Chancellorsville, of Grant at Chattanooga, or of Meade at Gettysburg. For a man of unquestionable capacity, of brilliant and continued success, of the largest useful-

ness to his country, his career as a fighter of battles sums up curiously. A defeat at Bull Run, a defeat at Shiloh, an assault made and repulsed at Haines's Bluffs, two assaults made and repulsed at Vicksburg, a flank attack at Chattanooga, in its immediate results very near a drawn battle, an assault made and repulsed at Kenesaw, three attacks received and repulsed with heavy loss on both sides at Peach-Tree Creek and before Atlanta, a little success at Averysboro', and an attack received and repulsed with heavy loss to himself at Bentonville,—these make up a fair general statement of the engagements in which he took part. As we study his military history, using his Memoirs to correct, verify, and add to what we knew before, we see reason to suspect that he does not possess in a very high degree two qualities needed to make a consummate commander. One of these is tactical genius, the other is the capacity of selecting the right subordinates, and the connected capacity of making men do just precisely what one wishes done. We seem to see the want of the first quality illustrated at Bull Run ; again, but less certainly, at Chattanooga ; again, before Atlanta, the day when McPherson was killed, when he "purposely allowed the Army of the Tennessee to fight the battle almost unaided, because [he] knew that the attacking force could only be a part of Hood's army, and that, if any assistance were rendered by either of the other armies, the Army of the Tennessee would be jealous" ; and again, confessedly, at Bentonville. As examples of the other want, we may cite his failure to hold General Wool to his promise to give him arms to put down the Vigilance Committee, his failure to make Morgan obey his orders at Haines's Bluffs, his failure to get Resaca taken by General McPherson, his failure to make Sooy Smith accomplish anything, and his failure to get Hardee's corps captured at Jonesboro'. But these are matters of speculation, and there may be no real foundation for the doubts suggested. They are interesting, as everything connected with the character of one of the foremost men of the day is interesting ; but, even if they are well founded, his great fame is secured.

We lay down these volumes with regret. We seem to be breathing a fresh and bracing and inspiriting atmosphere as we read them. They increase our pride in the General of our

Army and our regard for him. It is good to know him as we now know him; to recognize the kindly man in the relentless soldier; and to see what a clear-headed, right-minded, accomplished, faithful, successful commander has been born of our American civilization.

F. W. PALFREY.

ART. V.—*American State Universities, their Origin and Progress, a History of Congressional University Land Grants, a particular Account of the Rise and Development of the University of Michigan, and Hints toward the Future of the American University System.* By ANDREW TEN BROOK. Cincinnati: Robert Clarke & Co. 1875.

IN giving to the public the volume before us, Mr. Ten Brook has made a substantial contribution to the history of higher education in America. He has sketched the early progress of our colleges in the Atlantic States. He has given us a graphic picture of the state of culture in the West at the time when the general government adopted the policy of Congressional land-grants. He has traced briefly, but clearly, the characteristics of the different land-grants themselves. He has outlined the manner in which these different grants have been administered. He has given us in considerable detail an account of the difficulties and of the ultimate establishment on a firm basis of the most successful of the State universities. Finally, he has given us the practical result and embodiment of all his studies in a chapter on “The Prospective University.”

The value of a work of this kind depends far more upon the nature of the information it imparts, than upon the manner in which it is written. It is not our purpose, therefore, to attempt to write what would be called in any literary sense a critical review. We are, in fact, as we conclude the perusal of the book, in no critical mood. We hail the work as, for the most part, an original contribution to the educational history of our country. We are sure it contains much information

that needs to be disseminated. We are also sure that it will greatly interest every inquiring educator. We know that the author has had unusual means of observation. We remember that for many years he was Professor of Moral and Mental Philosophy in the University of Michigan, and that, too, at the very time of its most trying experience. We remember also that for many years he resided at one of the capitals of Germany, and was on terms of intimate acquaintance with the professors of one of the greatest German universities. We are profoundly grateful, therefore, that one who has had so large observation, and who was really so large a part of the University of Michigan at the time when its future greatness was made secure, has given us an account of its perils and its successes.

No intelligent reader of this volume will fail to observe that an important change has taken place in public opinion concerning the manner in which our colleges and universities ought to be supported. This change, so far as we remember, is nowhere alluded to by Mr. Ten Brook, and yet it is, perhaps, worthy of a somewhat careful consideration.

Every one knows that at the present day public opinion inclines to the establishment of a sharply defined line between our upper and our lower schools. The belief is almost universal that our common schools ought to be supported by general taxation. The welfare of the State manifestly demands that the children of the poor, as well as those of the rich, receive an elementary education. This interest could not be subserved, if the poor were to be left to their own unaided efforts. The State, therefore, says to the rich: You shall contribute of your abundance for the education of your poor neighbors' children. It matters not that you educate your own children at a private school and at your own private expense; it matters not even if you have no children whatever of your own to educate. You are a part of the State. You receive the benefits of that enlightened condition of society which comes from the general prevalence of schools; and, consequently, you must bear such a part of the burden of their support as your property is a part of the whole property of the State. But while this argument seems to be generally satisfactory when applied to the

support of the common schools, it is often objected to when applied to the support of schools of a higher grade. The fact is obvious that throughout the country the opinion prevails to a great extent that our colleges and universities, and even our academies, ought to be supported largely, if not indeed exclusively, not at the expense of the public, but by means of private munificence. Not long since a case occurred in one of the most enlightened of our States where a gentleman of high standing raised the question concerning the right of the school board to expend any portion of the school money for the support of a high school. Before the court it was argued on ethical as well as on constitutional grounds that the public moneys could not properly be expended in support of instruction in any other than what are commonly known as elementary branches. Happily this position was not sustained by the court; but it must be confessed that the arguments advanced were quite in harmony with the views on the question which, at present, are more or less generally enlightened.

Now it is our firm conviction that the distinction which we have noted is without substantial foundation. It seems to us that the arguments advanced in support of it are essentially fallacious; and, furthermore, that it is entirely at variance with the early views and habits of our own country.

It would scarcely seem necessary to plead the cause of higher education in a republic. In general and abstract terms everybody admits the necessity of it. It is too obvious to admit of question that there can be no intelligent guidance of the intricate affairs of state, without something of that discriminating knowledge which comes from a thorough training of the higher faculties. Of course it is impossible for all men to have large personal experience, and therefore it is best that, so far as possible, they should acquire large knowledge of the personal experience of others. Therefore the more of higher education you can have in a state the better. All this is commonplace, and will be universally assented to. But it is languidly admitted, rather than earnestly felt. It is, probably, after all, not too much to say that the masses of the people, as represented in the average legislature, half believe that higher education is a luxury to be privately enjoyed, rather than a

necessity to be publicly supported. The consequence is that in most of our States, while the people guard strenuously all encroachments upon the system of common schools, they are quite willing to leave the care of their higher institutions of learning in the hands of those over whom they have no control. This willingness, encouraged by the arguments to which we have already alluded, has resulted in the general adoption of a policy of non-interference.

But is it true that higher education is in any sense less necessary to the welfare of a state than the education afforded by the common schools? Is it not, after all, quite as essential that the men who are to make and administer our laws should be thoroughly trained, as that those who choose the lawmakers should know how to read and write? Nay, is there any ethical or logical reason why, if you provide a certain grade of education for the voter, you may not also provide a certain grade for the lawmaker? Is there any justification of the one, that is not a possible justification of the other? If these questions are answered as we apprehend they must be, the problem reduces itself to a very simple query: Is there any method by which higher education can be more certainly and more satisfactorily secured than by committing it to the charge of the state?

Those who answer this question in the affirmative, so far as we have observed, found their objections to the policy of state support either on the belief that it is unjust to the tax-payer, or that it is unsafe for the student. It is sometimes urged that, as, in the nature of things, higher education can only be acquired by the few, it ought not to be secured at the expense of the many. But to this it is a complete answer to say that such an education is a public benefit, and that unless it can be shown that this benefit can be better secured in some other manner, it ought to be provided for just as other public benefits are provided for. It is no argument against the establishment of hospitals and asylums by the state, to say that they are chiefly beneficial to the few only. No member of Congress presumes to argue against appropriations for lighthouses and harbor improvements, on the ground that such improvements are chiefly advantageous to merchants and navigators; and,

therefore, that merchants and navigators or their friends ought to construct them. The truth is, that a very large part of what are known as public improvements are directly beneficial to no more than a very small portion of the community, while the advantage derived from them by members of the public at large is only of that general and indefinite nature which comes from the improved condition of the state as a whole. It requires but a moment's reflection to perceive that no state could thrive, that no true civilization could exist even, if the principle were to be admitted that no man is to be taxed save for that which to him personally is to be of direct and tangible advantage. To admit the principle, and act upon it, would be to strike away the very possibility of social improvement. The argument, therefore, that our legislatures have no *right* to tax the people for the purposes of higher education, is utterly fallacious. The position can only be sustained when it is admitted that such education is of no advantage whatever to the state at large.

The other objection to which we alluded, is that in universities supported by the state, students are unsafe. This objection is not, perhaps, very loudly urged, but it is, without doubt, to a very considerable extent, secretly entertained. Occasionally it crops out in unseemly ways. We happened to know of a zealous editor who, not long since in a moment of thoughtlessness, allowed his spirit to escape his control, and to make an antic display of itself. In announcing the admission of a large class to one of our Eastern universities, which he did not think sufficiently religious, he headed his article, "*Two hundred raw recruits for Satan!*" It would, of course, be unjust to declare this editorial Boanerges as strictly representative of any large class of persons; and yet we fancy the number is not altogether inconsiderable who would differ from him chiefly in method of expression. It has to be admitted that there are vast numbers of good men and women who entertain the notion that those colleges which are in some way or other under the supposed control of the Church are the only safe resorts of our young men in search of an education.

Now, we wish to state explicitly that, in our opinion, this
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notion is not only without foundation, but that it exerts a pernicious influence on the cause of higher education in the country.

In the first place, the notion is founded on exaggerated views of the difference between the state and the denominational universities. It is often represented, and, indeed, believed, that institutions of the one class are distinctively religious, while those of the other class are distinctively irreligious. Such representations are really the most efficient means by which a numerical majority of the colleges in our country are kept alive. But these representations are almost as far as possible from the truth. There is, indeed, a manifest difference between the dominant spirit of a great state university and that of an obscure denominational college. But the very moment you bring to the college a large faculty and a large number of students, the difference vanishes. We have no disposition to make invidious comparisons. But we have repeatedly heard men of earnest religious faith and life, who have had professional experience in both classes of institutions, declare that the difference in this respect is imaginary rather than real. Nay, further, we have never heard the contrary asserted by any one who has had good opportunity of judging. We have come to believe, therefore, that the comparisons so frequently made are either outright cant, or are the product of entire ignorance on the subject.

The real distinction, then, is between the small colleges and the large ones. Here, no doubt, there is a marked difference. In the smaller institutions the student is under the more direct supervision of the faculty. The professors know far more intimately the characteristics of individual pupils. The peculiar wants of each are recognized, and are treated in their appropriate manner. It is also true that the individual peculiarities of the professors themselves leave a more positive impression on the mind of the student. If the instructor is ardently religious, as in a college of this class he is likely to be, a restraining, and perhaps even a religious influence may be exerted. These, in general terms, are the advantages held out by the small college. For certain purposes they are, doubtless, not to be despised, but they are entirely different in

kind from the advantages presented at a great university. They are the characteristics which direct rather than develop the mind. They stand guard over it, doubtless often keeping it out of danger, but they do not inspire it for its highest efforts. They keep it from utter failure, but they do not move it to the highest success. If the best education consisted simply of making perfect recitations and keeping out of mischief, the smallest college would be incomparably the best college. But the best education is far more than that. Perhaps it is correct to say it is an inspiration rather than an acquisition. It comes not simply from industry and steady habits, but far more largely from that kindling and glowing zeal which is best begotten by familiar contact with large libraries and museums, and enthusiastic specialists. It shows itself not so much in the amount which its possessor has made himself master of, as in the spirit with which he takes what he knows, and goes out with it to grapple with his life work. This is the reason, it may be said in passing, why valedictorians and senior-wranglers so often disappoint the hopes of their friends. For the moment a student begins to covet a given position, he is tempted, for obvious reasons, to limit his efforts to the work which will favorably affect his standing. His success depends upon the regularly perfect performance of the task assigned. He keeps himself, therefore, within very narrow limits. So long as this spirit dominates, it tends to narrowness rather than breadth. Its possessor is working for a price, whereas all genuine scholarship is, and must be, its own sufficient reward. The difference is quite enough to account for innumerable failures as well as innumerable successes in life. It needs scarcely to be said that the highest successes are to be awaited when to the exact scholarship of the one is joined the enthusiastic spirit of the other; and it is this combination of excellences which the large university is best adapted to secure. While the small college affords guidance and protection, the large one offers guidance, inspiration, and opportunity. What the respective merits of the city and of the country are to the man of business, those of the large institution and those of the small one are to the student. As the young merchant will be less exposed to financial perils in a village grocery than in the whirl

of a commercial metropolis, so will the student be less exposed to danger in the quiet retreat of a rural college than in the more exciting atmosphere of a metropolitan university. But in both of these avocations it is the stir, the enthusiasm, the unceasing activity, and, above all, the constant intercourse with men of the same pursuits and the same ambitions, that develop the greatest energies and secure the highest successes.

The advantages of a concentration of energies for higher education have long been felt in every nation of Europe. England, Ireland, and Scotland, with a population not much less than our own, have scarcely half a score of institutions empowered to grant degrees. In France there is, strictly speaking, but a single one. In Germany, where the system of education has been brought to the highest perfection, the number is only twenty-one, or one for about two millions of inhabitants. In our own country the latest announcement is that we have three hundred and twenty-two colleges and universities, each entitled, so far as municipal law can bestow it, to rank itself as one of our highest institutions of learning. A single one of our States has the enormous number of thirty-three colleges and nine universities, with an average gross income of somewhat less than nine thousand dollars each: forty-two faculties, forty-two libraries, forty-two museums, forty-two complete sets of apparatus, to say nothing of laboratories and observatories to be provided for and administered out of an income which scarcely exceeds, if indeed it does exceed, the insufficient income of Harvard College!

Now, it is to be noted that this fatal isolation of educational appliances is the direct result of our methods of supporting our colleges and universities. In our opinion the system of private endowments could never have resulted otherwise. Local interests and ambitions are ever active, and have ever exerted a powerful influence. Men will give money for a college in their town, when they would give nothing for a college at a distance. Then, too, the attitude of the different religious sects has tended powerfully in the same direction. Every denomination knows that, if it is to push its way in the civilization of the present century, it must have an educated clergy. It must also guard its members, especially its members in pro-

cess of education, against the influence of opposing creeds. To accomplish this result it must have schools. As our system practically excludes parochial schools, it is limited to the college and to the theological seminary. These, therefore, it must have in as great abundance as possible. Whenever a rich sectarian dies, therefore, he is exhorted to leave his money to one of the sectarian schools already founded ; or, if he is unwilling to do that, to found a school in his own name. The exhortation is often made effectual by the fact that the cost of an efficient college is ridiculously under-estimated. Not long since occurred an example that will serve as an illustration. An effort was made to endow a denominational school in the heart of one of our largest States. A great meeting was held for the purpose. Within less than a hundred miles were several colleges already in operation, besides a university with an endowment of more than two millions of dollars. And yet one of the most zealous members was reported as using substantially these words : "We must endow a great Christian university. Yes, we must have the greatest and best university in the country, *even if it takes an endowment of five hundred thousand dollars!*" Here was pious simplicity indeed ; and yet the speech was not altogether exceptional either in piety or simplicity. It was the identical spirit which has dotted the country all over with mendicant colleges and universities, whose chief work in the general cause of higher education has been to keep down the standards of scholarship, and to stand in the way of something better.

Now, in our opinion the public has not sufficiently understood and appreciated the leading cause of this condition of affairs. We have no doubt that the immense number of our colleges is very generally deplored. But we are not sure that the public is ready to admit either the extent of the evil, or the fact that the evil is the legitimate and necessary product of our system. That it is such a product, we believe it is easy to show. We believe that as soon as it was determined that the colleges and universities were not to be supported in the same manner as the lower schools are supported, it was fixed as a necessary consequence, that, while the lower schools would flourish, the colleges and universities would multiply

beyond all demand, and a vast majority of them would languish beyond all recovery. We believe that under the change of policy to which we have referred, the importance of higher education has declined in public estimation ; that while a comparison of the state of the learned professions at the present time with the same of fifty years ago will reveal a degeneracy, a careful study of statistics, like those prepared by President Barnard in 1870, will also show that the number of students seeking a college education has relatively declined. We believe, furthermore, that nothing but a return to the early policy of our country will reinstate the general cause of higher education in the position of relative importance which it formerly occupied.

It has thus far been assumed that the present method of supporting our colleges and universities is quite at variance with that pursued in the early history of the country. It is of importance in this connection to bring out the fact of such a change into a clear light. For the purpose of doing so, let us consider for a few moments the policy pursued up to the time of the Revolution.

In general terms it may be stated that, through all the dark periods of our colonial history, the encouragement of higher education was regarded as one of the great interests of the state. It was no doctrine of the fathers that higher education was less entitled to the fostering care of the commonwealth than was the education afforded by the common schools. It seems never to have entered their imaginations that the university was not entitled to the support of the entire people. But on so important a part of our subject, it is perhaps desirable that we should be more specific.

It was in the year 1636, only six years after the arrival of Winthrop and his colony, that the General Court of Massachusetts "voted £ 400, a sum, according to one authority, equal to a year's rate of the whole colony, toward the erection of a college."* It is of interest to note that this was two

* President Quincy in referring to this act says, "To this date we trace the origin of the seminary. This is,

.... 'Gentis cunabula nostræ
.... uberrima regna.'"

years before John Harvard gave to the college his name by leaving it half of his estate and the whole of his library. There is an important sense, therefore, in which Harvard College was a "State institution." Not only was the first grant made by the Legislature, but through the whole of the colonial period, the college never ceased to depend in large measure upon the General Court. If the amount of patronage extended by the civil authority was small, the reason was that "the necessities of the country were extreme," and its "available resources scanty and precarious." The people were struggling for their existence. Their annual revenues were constantly exhausted. And yet regular appropriations were made for the benefit of the college. President Quincy declares that during the whole of the first seventy years of its history, "its officers were dependent for daily bread upon the bounty of the General Court." * Eloquent praises have been bestowed, and justly bestowed, upon the generous sacrifices of the colonists for the benefit of the college. There is, perhaps, nothing more touching and inspiring in the whole glorious history of New England, than the list of simple presents and legacies given in those early days "towards establishing for learning a resting-place, and for science a fixed habitation, on the borders of the wilderness." But it ought not to be forgotten that this noble generosity was only a part of the financial history of the college. It takes strong hold of the affections and the imagination; and, for that very reason, it lingers in the memory, while the regular and substantial gifts of the General Court are forgotten. But to suppose that the college was in any accurate sense founded by a single individual, and was supported by individual bequests and donations, is entirely at variance with its true history. Nor is it correct to suppose that it was founded by the Church. The Church and the State were, it is true, united, but the Church, as such, it should be distinctly understood, had nothing whatever to do with the college. It was the General Court that gave to the institution its name. By the charter of 1642 the entire control of the college is vested in a board consisting of "the governor and deputy-governor for the time being, and all the magistrates of this jurisdiction, together with the

* History of Harvard University, I. 40.

teaching elders" (not the clergymen) "of the six next adjoining towns, namely, Cambridge, Watertown, Charlestown, Boston, Roxbury, and Dorchester." Eight years later, when the charter was modified, the control passed into the hands of the President and Fellows, all of whom were named by the General Court. It is a fact which throws a flood of light on the spirit with which the affairs of the college were conducted, that in neither of these charters is there a single clause, or a word even, that is not in the most liberal and catholic spirit. If the college was even a Christian college, it was not because of any characteristics of its fundamental law, but because it was controlled and administered by Christian men. The charter of 1650, that which for more than half a century was the fundamental law of the college, expressly refers to the object of the institution as being "the advancement and education of youth in all manner of good literature, arts, and sciences."* And if the fundamental law was liberal in its spirit, the corporation itself was not less so. It is a fact worth noting, that "the two first presidents, and the only ones appointed by the early emigrants, were known unbelievers in points of religious faith to which the Congregational clergy of that time rigidly adhered."† The original seal of the college also illustrated the spirit of its founders. The single word "*Veritas*" was deemed a sufficient motto. It was probably not until President Mather's turbulent administration that the present one of "*Christo et Ecclesie*"‡ was adopted. Be that as it may, President Quincy expressly declares that the one of 1643, consisting of the three open volumes and the word "*Veritas*" is the only seal of the college which has the sanction of any record.

This early dependence of Harvard upon the State was continued, moreover, not only during the whole of the colonial period, but even after the adoption of a State constitution. That instrument devoted an entire chapter to the interests of the only college within its jurisdiction. "It shall be the duty," so runs the Constitution, "of all legislatures and magistrates, in all future periods of this Commonwealth, to cherish the in-

* Quincy, I. 591.

† Ibid. 49.

‡ Ibid. 47.

terests of literature and science, and all seminaries of them, especially the University at Cambridge, public schools and grammar schools in the towns."

Thus it will be seen that Massachusetts considered the university as a part of her school system. All parts of that system received her fostering care. "To the end that learning may not be buried in the graves of our fathers," it was ordered, "that every township, after the Lord hath increased them to the number of fifty householders, shall appoint one to teach all children to write and read; and where any town shall increase to the number of one hundred families, they shall set up a grammar school, the masters thereof being able to instruct the youth so far as they may be fitted for the university." As time advanced, these high schools or academies were recognized and designated as a part of the public-school system. A plan was at one time advanced which contemplated one in each county. Of these, fifteen were incorporated prior to 1797, and seven of them had received special donations of lands in Maine towards a permanent endowment. Meanwhile, for the college the Legislature not only paid a regular appropriation, but it granted frequent special enactments in its favor. The rent of the ferry between Boston and Cambridge was given to it, and once at least "every family in each of the colonies gave to the college at Cambridge twelve pence, or a peck of corn, or its value in unadulterated wompompeage." From whatever point of view we look, then, we find that the schools and the college received equal encouragement and equal support at the hands of the Legislature. If a careful comparison were to be made, it would probably show that the college received the most numerous favors.

The second college established in the Colonies was that of William and Mary. In 1692 the reigning monarchs of England granted to it £ 1,985 in money, twenty thousand acres of land, and a tax of a penny a pound duty on all tobaccoes exported from Maryland and Virginia to the other Colonies. In addition to these royal favors, the Colonial Assembly gave it by temporary laws a duty on liquors imported, and on skins and furs exported.* From these resources it was in regular receipt of

* Jefferson's Works, VIII. 391.

upwards of three thousand pounds a year. By the charter which it received from the parent country, it was under the government of twenty visitors, who were to have full legislative power, and who, in connection with the president and professors, were allowed a representative in the general Assembly.

The college thus endowed and provided for by the State remained the only seminary of higher learning in Virginia until as late as the outbreak of the Revolutionary War, and, with a single feeble exception, the only one until the year 1825. It could thus call to its service the ablest professors to be found. It exerted a powerful influence on the schools of the State. Under the inspiration of its guidance these schools attained a high grade of excellence. Jefferson wrote in 1820 that "the mass of education in Virginia, before the Revolution, placed her with the foremost of her sister Colonies."* In 1788, the same statesman had written from Paris to his friend, Mr. Izard, in regard to the very great excellence of the faculty of William and Mary College; and, after canvassing the merits of its respective members, he concluded by saying: "I know no place in the world, while the present professors remain, where I would so soon place a son."†

But notwithstanding these characteristics, there were defects in the early organization of the college which in the course of time made themselves felt. The liberal spirit which had characterized the charter of Harvard was wanting in William and Mary. The college was an establishment purely of the Church of England. The visitors were required to be all of that church. The professors were required to subscribe its Thirty-nine Articles. The students were obliged to learn its Catechism. In short, one of its fundamental objects came to be "to raise up ministers for the Church of England." When the Revolutionary War came on, the spirit of opposition to everything English, together with the natural jealousies of so sectarian a college, was enough completely to destroy its influence. In the early part of this century it had sunk so low that even Jefferson, who had written in such enthusiastic terms of it in 1788, despaired of raising it into life.

* "Early History of the University of Virginia," p. 185.

† Jefferson's Works, II. 428.

When, in 1824, it was proposed by some of its friends to remove it to Richmond in the attempt to resuscitate it, Jefferson opposed the movement, on the ground that in despair of the college, the State had founded the University of Virginia, and that it would be impossible to give to the two an adequate support. When it is remembered that in 1824 Virginia was, with the bare exception of New York, the richest and most populous State in the Union, the language of Jefferson on this point is of very interesting significance. "If both remain," writes he, "there will not be students enough to make either worthy the acceptance of men of the first order of science. They must each fall down to the level of our present academies, under the direction of common teachers, and our State education must stand exactly where it now is. Few of the States have been able to maintain one university, none two. Surely the Legislature, after such an expense incurred for a real university, and just as it is prepared to go into action under hopeful auspices, will not consent to destroy it by this side-wind."* At the time this letter was written, Virginia had a population of about one million two hundred thousand, and yet we have the clearly expressed opinion of the distinguished author that it was not best to remove the weaker of the two institutions, because by doing so, they would divide the number of students, and so oblige both to "fall down to the level of our present academies, under the direction of common teachers."

Now the view entertained by Jefferson was by no means exceptional. Indeed, a similar spirit had pervaded the whole history of our colonial life. It was from considerations of the same nature that the founding of a college at New Haven was postponed until sixty-five years after the first colonization of Connecticut. But on this subject the account of President Dwight is of so much interest that I give it entire: —

"The first house in the colony of Connecticut was erected in the year 1635, and the first in the colony of New Haven in 1637. The first house in Salem was built in 1626. The act of the Legislature which gave birth to Harvard College was passed in 1636. Only ten years, therefore, elapsed, after the beginning of a settlement in Massa-

* Jefferson's Works, VII. 384.

chusetts, before a college was commenced in earnest ; whereas sixty-five years passed away after the colonization of Connecticut was begun, and sixty-three after that of New Haven, before any serious attempt was made toward the founding of Yale College. But you are not hence to conclude that the colonists of Connecticut and New Haven were at all less friendly to learning than those of Massachusetts. The project of establishing a college in each of these colonies was very early taken up, but was checked by well-founded remonstrances from Massachusetts ; who very justly observed, that the whole population of New England was scarcely sufficient to support one institution of this nature, and that the establishment of a second would, in the end, be a sacrifice of both. These objections put a stop to the design for a considerable time.

"Of the serious design of the New Haven colonists to establish a college, the following document, copied from the records of Guilford, furnishes decisive evidence :—

"At the General Court held at Guilford, June 28, A. D. 1652,

"Voted, The matter about a college at New Haven was thought to be too great a charge for us, of this jurisdiction, to undergo alone, especially considering the unsettled state of New Haven town, being publicly declared, from the deliberate judgment of the most understanding men, to be a place of no comfortable subsistence for the present inhabitants there. But if Connecticut do join, the planters are generally willing to bear their just proportions for the erection and maintaining of a college there. However, they desire thanks to Mr. Goodyear, for his kind proffer to the setting forward of such a work.'

"Whether the foundation mentioned above would be considered as such, in a legal sense, may be doubted ; *that it was the beginning of this seminary is certain*, and from this period, the inhabitants of every description, particularly men of education and influence, embarked in the design with zeal.

"In October, 1701, the Legislature granted these gentlemen [the petitioners] a charter, constituting them 'trustees of a collegiate school in his Majesty's colony of Connecticut,' and invested them with all the powers which were supposed to be necessary for the complete execution of their trust." *

From this extract two things are evident : first, that the colonists understood the fact that a single college might thrive where two colleges would be sure to fail ; and, secondly, that

* "Dwight's Travels in New England and New York," I. 168.

the first movement made in Connecticut for the founding of a seminary of higher learning was made in the Legislature. It should be noted that it was a movement in the Legislature which President Dwight characterizes as "the beginning of this seminary." The same high authority, moreover, after recording the fact that numerous and valuable donations had been received from private individuals, declares that the "principal benefactor, both during this period and all which have succeeded, was the Legislature."* In confirmation of this statement, the author remarks that the Legislature in their first charter gave to the institution the annual sum of fifty pounds sterling, and continued this grant until the year 1755. At that time it was discontinued, on account of the heavy taxes occasioned by the last Canadian war. In 1750, "Connecticut Hall" was erected from money "principally furnished by the Legislature." But the largest gift of the State was in 1792. At this time the Legislature appropriated to the institution the arrearages of certain taxes which had for a considerable period been due to the State, on condition that the governor, lieutenant-governor, and six senior councillors, for the time being, should, by vote of the corporation, as well as the authority of the State, be received as members of their board. This proposition was unanimously accepted by the board, and the income from the appropriation proved to be so considerable that the trustees were enabled immediately to make large and important improvements. With the money so obtained they purchased the whole front of the square on the northwestern side of the green, and on it erected three new academical buildings and a house for the president; they made a handsome addition to the library; they procured "a complete philosophical and chemical apparatus";* and, finally, they established three new professorships. Thus it will be seen that down to the beginning of the present century, Yale College was chiefly indebted to the State Legislature for the means of its prosperity and its advancement.

It would take us too far from our purpose to consider the history of each of the colleges founded previous to the Revolu-

* Dwight, I. 169.

† Ibid. 173.

tion. But it will be enough to state that the methods of support which we have seen to prevail at Harvard, William and Mary, and Yale were in no respect exceptional. Wherever there was any interest in educational advancement, that interest showed itself as a rule in appropriations of money and lands for the benefit of the colleges and high schools.

It has already been shown that the comprehensive liberality of Massachusetts extended to the appropriation of lands for the benefit of the academies. The same liberality was characteristic of the other Colonies. As early as 1701, the very year of the first charter of Yale College, the Legislature of Connecticut established "a grammar school in each of the four chief counties to fit pupils for college," and granted to each of them an annual appropriation.

In New York the early progress of education was slow. In 1656 there were only three schools in the whole Province. But in 1659 a Latin school was started, and three years later we find that it was resorted to by pupils from the Hudson, the Delaware, and from Virginia. When in 1664 the Province fell into the hands of the English, the king's commissioners were instructed to make "due inquiry what progress hath been made towards the foundation and maintenance of any college schools for the education of youth." The first movement after this inquiry resulted in an appropriation by the Colonial Assembly of £1,800 for a college, and seven years later, that is, in 1754, in a royal charter. On the recommendation of the first president, the Lords of Trade reported to the Privy Council in favor of a grant of twenty thousand acres in the immediate vicinity of New York.

In the more southern Provinces, appropriations for higher education were not less adequate. In Maryland the Legislature went so far as to make provision for high schools in all the counties as early as 1723. To the schools thus established aid was given in money, and lands were appropriated in each of the counties. Still further in the same interest, a poll-tax of twenty shillings was imposed on negroes and Irish Catholic servants imported into the Province. Under these really luxurious provisions the academies thrived. Had the State gone further and endowed a university, so that the system

would have had the advantage of a head, it is difficult to see in what respect the schools of Maryland, taken as a whole, would have been inferior to those of New England. But a fatal mistake was committed. The State should either have endowed a strong university or college, whose superiority over the other schools would have been acknowledged, or it should have been content to send its pupils to colleges in the other States. But it did neither. In 1782 the school for Kent County applied to the Legislature for a college charter. The application was granted, and the institution took the name of Washington College. The number of students was somewhat augmented, but the kind of instruction was not materially changed. To the new college the State granted an annual appropriation of twelve hundred and fifty pounds. Two years later the school at Annapolis made a similar application, and was treated in a similar manner. This second institution was called St. John's College, and was granted an annual appropriation of seventeen hundred and fifty pounds. Thus the small State of Maryland had two colleges at a time, when it would have been difficult to support a single one. Still further, the origin of the colleges had established certain jealousies which it was impossible to subdue. The superiority of the new institutions over what they had previously been was not so marked as to *command* respect, and, therefore, they were doomed to failure. As academies they had been admirable, as colleges they were nothing. So universal became the dissatisfaction, that in 1805 the State withdrew its aid altogether. In the same year St. Mary's College was founded at Baltimore; and thus the people who could scarcely keep alive two colleges with the help of regular legislative assistance, found three on their hands with the legislative appropriations withdrawn. This is, in our estimation, one of the saddest chapters in our educational history. President Sparks, in reviewing education in Maryland, has fitly remarked that "the efforts of this State in advancing the interests of learning have been liberal, honorable, and worthy of the highest praise";* and yet, notwithstanding these munificent efforts, the cause of higher education, by reason of the dispersion of its resources, has dwindled into abject feebleness. Sad as this

chapter is, we are persuaded that no one can be studied with more profit by the present generation of Americans.

In addition to what we have already remarked concerning the schools in Virginia, we shall only call attention to the system so urgently put forward by Jefferson. This great statesman saw, as no other person of equal prominence has seen, the desirability of connecting all the schools of the State in a simple organic whole. His system was essentially the system of Prussia. He proposed that every township should have at least one free English school; that the whole State should be divided into ten districts, in each of which should be a gymnasium or college; and, finally, that the system should be made complete by the establishment of a single great university. The whole system was to be supported by taxation according to property. This plan was reported before the Legislature as early as the year 1779. It was pursued by Jefferson with the most determined perseverance for nearly fifty years. But his worthy zeal was in vain. So long as he endeavored to raise the College of William and Mary to the rank required for a university, his project was opposed by all dissenters, for the reason that the college was strongly Episcopalian. As soon as he abandoned the college, and proposed to endow a separate university, the project was opposed by the college and by the best of its powerful friends. When it was proposed to remove William and Mary to Richmond, and to have two universities in the State, Jefferson himself saw that it would be impossible to support the two, and that the plan, therefore, involved ultimate disaster. Thus it was impossible to concentrate a sufficient force to carry out the statesman's design, and the most magnificent educational project yet devised in this country was destined to virtual failure. The merit of the scheme was in its completeness; when, therefore, Jefferson found himself obliged to limit his efforts to the founding of a State university, he found his project shorn of its real means of success. A university without good subordinate schools is like a supreme bench without efficient subordinate courts. The University of Virginia failed to realize the hopes of its great founder and its numerous friends, because the State had neglected to provide preparatory schools. Even the great universities of Germany rest upon

the gymnasia as their foundation. To suppose that any great university can flourish without the support of efficient schools, is to suppose that a great edifice will stand in mid-air.

In the Carolinas the schools of all grades were, from the first, under the nominal support of the State; but no efficient system was provided for, and, consequently, no high success was attained. The Constitution adopted by North Carolina in 1776 made it the duty of the Legislature "to establish schools for the convenient instruction of youth." It also required the establishment of "one or more universities." But no adequate endowment was secured; the Legislature was indifferent, and universal inefficiency was the result.

In South Carolina the educational spirit was somewhat more creditable to the people of the State. As early as 1700 the Legislature provided for a free school at Charleston, and gave efficient support to the country schools. The fruits of this policy soon began to be seen. During the first half of the eighteenth century,—indeed, as late as to the outbreak of the Revolutionary war,—a greater number of students went to Europe for a university education, from South Carolina, than from any other Colony. The want of facilities for higher education within the borders of the State, however, came to be seriously felt. In 1769 a bill was introduced into the Legislature for founding a college, but this, for various reasons, was defeated. In 1785, however, the effort was renewed. Not content with a single college, the Legislature now provided for three. Ten years later, a fourth was added. The result was just what the result of a similar policy had been in Maryland,—just what it must be everywhere. The State had, at best, but few students who desired a collegiate education. Some of these went to Europe, some of them went to the North. The remaining number, when distributed among four colleges, was ridiculously inadequate to any respectable appearance. The tendency of very small numbers is invariably to depress the standards of scholarship. So it was, of course, in South Carolina. Within ten years the four colleges had "descended to the rank of grammar schools"; and the Legislature felt compelled to take the subject once more in hand. This it did wisely and fearlessly. In 1801 it established the South Caro-

lina College on so liberal a plan, that the institution was at once raised far above all rivalry with the other colleges. The latter sank to their proper condition of preparatory schools, while the former became supreme. The educational influence of the college, thus established, and continued under the inspiring guidance of men like Dr. Maxy and Dr. Lieber, it would not be easy to exaggerate. In less than twenty years after the founding of the college, the State Legislature had given to it as much as \$ 286,000,— a sum which at the beginning of this century was truly magnificent. But no State ever made a better investment. During the first half of this century the general accomplishments and the political ability of the statesmen of South Carolina were the just pride of the State, and would have been the pride of any State. In forming this high standard of intellectual and political power, the influence of the college was immeasurable. If objection be raised against the political doctrines generally held by its alumni, the answer is, that the heresy of the South had its origin and its inspiration, not in one who was educated in South Carolina, but in one who was educated in Connecticut.

The youngest of the thirteen original States presents no exception to the spirit which we have seen manifested elsewhere. The Constitution of Georgia, which was adopted by the State in 1777, provided that every county should "establish and keep a school at the public expense." Eight years later the Legislature took hold of the work of developing the schools into a complete system. To this end it was enacted "that the county surveyors, immediately after the passage of this act, shall proceed to lay out in each county twenty thousand acres of land for the endowment of a college or seminary of learning, and which said lands shall be vested in and granted to his honor the governor for the time being." On the basis of this appropriation a university was placed at the head of the school system of the State. The endowment was amply sufficient to provide not only for its present wants, but also for its perpetuation.

It is not our purpose to inquire into the causes of educational success and failure in the original States. It is enough to have shown that, during the whole of our colonial history, the sup-

port of the public treasury was comprehensively bestowed alike upon the colleges and the lower schools. During all that period we are to note that no discrimination was made in favor of the one class or the other.

But soon after the independence of the country was secured, a change took place. New elements began to complicate the educational question. Though the colleges, as well as the subordinate schools, had been nominally under secular control, yet the religious spirit of the time was very intense, and this intensity showed itself to a very considerable extent in the schools. During the colonial period the dissenting sects had been comparatively feeble. But now they began to acquire strength. They not only grew, but they multiplied. They saw the necessity of an educated clergy. They perceived that an educated clergy could best be secured by means of schools of their own. In the course of fifty years colleges were planted by the score in the interests of the sects, where, in the interests of education, scarcely a single one was needed or could have been supported.

The effect of this new tendency was doubly disastrous. It weakened the individual colleges by dividing the aggregate number of the students between so great a number of institutions. It depressed the standard of scholarship in both professors and students. But this was not the whole, nor, indeed, the worst result. Its most disastrous consequence was in the fact that it paralyzed all efforts to secure appropriation for higher education from the State legislatures. The State could not support all, and therefore no course was open but for it to withdraw its support altogether, and to turn over the colleges to the various religious denominations in whose interests they had been founded. Thus in the course of the first quarter of the present century an entire revolution in our educational system was wrought. The State had formerly supported generously both the higher schools and the lower; now, it retained control of the lower, while it substantially abandoned all interest in the colleges and universities.

The most immediate result of this abandonment of the early policy of the country was an enormous increase in the number of colleges. As soon as the existence of a college depended

upon private benevolence; rather than upon the will of the public, various considerations increased the general tendency. Local pride often had much to do with the founding of new institutions, or with the raising of old ones out of their proper sphere. A still greater influence was exerted in the same direction by denominational feeling. Does our denomination need a college or an additional college in this State? Can we in any possible way get one planted? These are the questions that have generally been asked, the questions that have determined the establishment of the new institutions. The last thing considered is the question whether or not such a college is needed by the public at large. A few thousand dollars are secured for the beginning of an endowment. Ambitious localities are ready to encourage the new project by giving lands, and perhaps erecting buildings. As soon as the infant college is fairly brought into life, its struggle for existence begins. It receives gifts of books, largely from superannuated clergymen and members of Congress, and calls them a library. It collects a few geological specimens, and calls them a museum. If it offers to its professors very small salaries, it strikes the balance, Charles Lamb fashion, by giving them an excess of work. But in the scramble of so many colleges for the means of existence, something more than these inducements is necessary to secure any respectable number of students. A preparatory school is therefore established in connection with the college. By nursing the scholars through a number of years of preliminary training, it is hoped that a considerable number will be induced to take the college course. But notwithstanding these efforts, the number of students in the college classes remains ridiculously small. Though the institution calls itself a college, and persists in being known as a college, an examination of its catalogue reveals the fact that it is but one tenth college, while it is nine tenths preparatory school.

Now, we are not blind to the fact that under certain circumstances this state of educational affairs would not only be no reproach, but would even be a just cause of pride. We have already expressed our admiration of the self-denial of the fathers in founding our earliest colleges. But the circumstances which surrounded the fathers, and made their devotion

so praiseworthy, no longer exist. The gift of two mites was admirable, not because it was two mites, but because its giver was a poor widow. The two mites of the millionaire are ridiculous and contemptible. If we were to establish the proportion we should have to say: As the State was to the college then, so is the State to the college now. But how far, how very far, from the truth would this proportion be! If the policy of the founders of our country had been generally followed, it is difficult to see why we might not have had ere this universities that would compare favorably with those of the Old World. It is often said that we are too young to have great schools; but there is no more absurd mistake than to suppose that universities must be venerable before they can be great. The great schools at Berlin, Bonn, and Munich were all founded within the present century, and the youngest of them has some two hundred professors and more than two thousand students. In comparison with these, what single institution have we that can for a moment be considered worthy of the wealth, the intelligence and the enterprise of our country? We believe that all who are familiar with what a great university ought to be, and is, will answer that we have not a single one.

It would be difficult to determine how far the tendency to which we have referred has influenced the respect of the public for higher education. There can be no doubt that it has tended to depress the standards of scholarship. Reasoning *à priori* we should say also that it would tend to diminish the esteem in which colleges and college education are held. But we are not left to the uncertainties of *à priori* reasoning. Statistics have been accumulated which show beyond all question that since about 1830 the number of students seeking a collegiate education has steadily diminished. Nor is this diminution confined to any single portion of the country. The number of students, for example, from all New England, attending colleges throughout the country, was not materially greater in 1869 than it had been in 1838, although the population in the mean time had increased by more than fifty per cent. To be more precise, the ratio of students from New England in all the colleges of the country, in 1838, was one in every twelve hundred and ninety-four; while in 1869 it was only one in

nineteen hundred and twenty-seven.* In the country as a whole, the number of students in college in 1870 was somewhat less than it had been in 1860, though the population of the country had increased by more than thirty-three per cent.† That this diminution was in part occasioned by the war is quite probable, but we are prevented from attaching too great importance to this cause by the fact that the number had been steadily diminishing for more than twenty years. In 1840 the number of students in college in the whole country was in proportion to the population as one in fifteen hundred and forty-nine; in 1860, as one in two thousand and twelve; while in 1869 it had declined to as low as one in two thousand five hundred and forty-six.‡

* These and the following figures are all taken from the elaborate statistics prepared by President Barnard, of Columbia College, and published in his Reports of 1870. They were made out from inspection of catalogues from all the colleges and universities in the country, and are, without doubt, approximately correct. The number of students from the States of New England in all the colleges of the country, in proportion to the population, is more elaborately shown by the following table:—

Years.	Maine.	New Hampshire.	Vermont.	Massachusetts.	Rhode Island.	Conn.	New England.
1826	1 : 2557	1 : 1869	1 : 1678	1 : 1136	1 : 2525	1 : 1180	1 : 1513
1838	1 : 2851	1 : 1035	1 : 1034	1 : 1140	1 : 1773	1 : 1101	1 : 1294
1855	1 : 2141	1 : 1359	1 : 1366	1 : 1627	1 : 1957	1 : 1860	1 : 1689
1869	1 : 2295	1 : 1874	1 : 1572	1 : 1771	1 : 1917	1 : 2290	1 : 1927

† According to an estimate made by President Barnard, from catalogues received from all parts of the country, the number in 1870 was 13,361, whereas in 1860 it had been 13,661. Report for 1870, p. 57.

‡ This proportion is more fully shown by the following figures. The number of students for 1869 is somewhat conjectural, inasmuch as sixty-five of the colleges in the country did not respond to the request for catalogues. It is assumed that the number of students in each of these sixty-five colleges is the same as in each of the others, after deducting the twenty-eight colleges of New England, New York, and New Jersey. This assumption, however, is doubtless excessive, and consequently gives the number of students as greater than the facts would warrant. It accounts, moreover, for the discrepancy between these figures and those above given.

	1840.	1860.	1869.
Population	14,582,029	27,490 266	36,000,000
Students	9,416	13,661	14,141
Ratio	1 : 1549	1 : 2,012	1 : 2546

Thus it is evident that the number of undergraduate students in the country, for the thirty or forty years previous to 1870, was not only diminishing, but that the diminution during the last ten years of the period was very remarkable. What the tendency since 1870 has been, we have at hand no means of determining.

Now, whatever may have been the specific causes that have contributed to this diminution,—and they are doubtless several in number,—it is evident we are forced to the general conclusion that the colleges of to-day, as a whole, present less attractions to young men than did the colleges in the early part of the century. It may have been partly because courses of study have not conformed to the public demand. It may have been in a measure owing to the intense mercenary spirit which for the last forty years has had possession of the country. But in our opinion it is far more largely due to the insignificance of the modern college in the popular imagination. Ambitious young men who aspire to professional and political honors bend their chief energies to the means of helping themselves on. Forty-two colleges in a single State are sure to be insignificant, and are sure to be thought insignificant. The popular imagination attaches to them very little importance; and, as a matter of fact, the graduate finds that his degree has given him little or no advantage over his fellow. The ambitious young man, therefore, is quite likely to eschew the college and betake himself at once to the more attractive experiences of the office and the political stump.

This is no fanciful picture, but one that may be shown to be absolutely true to the facts. The popular impression, at least among literary men, is that college graduates are considerably less numerous and less conspicuous in the professions and in political life than were men of a similar education fifty or a hundred years ago. The popular impression is doubtless correct. In regard to the professions it is, perhaps, difficult to speak with great confidence or precision; but in regard to the prominence of college-bred men in political life, the position admits of absolute demonstration. A study of the dictionaries will show beyond all question that the number of graduates elected to the last Congresses is considerably less than was the

number elected in the early days of the Republic. We had supposed this to be the case; but after a somewhat wearisome turning over of Drake and Lanman, we have found the difference to be even greater than we had suspected. Of the signers of the Declaration of Independence, for example, thirty out of fifty-six were college-bred; of the Senate of the First Congress, fifteen out of twenty-six; while of the Forty-first Congress, the latest of which we could procure exact information, the proportion from the same States was only seven out of twenty-six. If the investigation were to be extended to the House of Representatives and to the other States, the comparison would probably be still less favorable. Be that as it may, it is too evident that for some reason or other the graduate of to-day is not so likely to be the man chosen by the people as was the graduate in the early days of the Republic. It thus becomes just as obvious that college graduates, as a class, are less conspicuous than they were formerly, as we just saw it to be that they are relatively less numerous.

It needs only to be said, in concluding this part of our subject, that the responsibility of this serious, if not even alarming, tendency rests alone with our present educational system. It cannot be said to rest with the colleges, for it would be unjust to demand of them the impossible. They accomplish all, be it said without qualification, that colleges under these limitations are able to accomplish. As a rule they are administered by men who, for ability, for earnestness, and for devotion would at least compare favorably with any other class of men to be found in the country. But they are bound hand and foot by the poverty of the means they have to do with. Probably no American educator has visited the alcoves and the museums of a European university without turning away heartsick at the thought of the meagre appliances to which he must return.

For this meagreness there is of course no remedy, except by removing its cause. There is no reason to hope for any radical change for the better until, by some means or other, the number of colleges ranking themselves with the highest is reduced. To this end we believe that every consideration of true policy requires that the interest of the people should be concentrated upon a limited number of the larger and stronger

colleges and universities. We believe that these should be raised into such conspicuous pre-eminence that the smaller and weaker ones will cease to be regarded as on the same level or to be entitled to rank in the same class. We believe that in no other way can higher education be raised to the rank which it now holds in Europe, or even to the rank which it formerly held in our own country. If in the older States it is impracticable to enlist the legislatures in the work of raising the few at the expense of the many, the hope of a favorable change must rest upon the basis of private benevolence. But in the newer States where State universities have been established, no such limitations are imposed. There would seem to be no obstacle in the way of a large policy of legislative liberality similar to that which characterized the early history of New England. With the vast wealth of the West to support it, such a policy could not fail to build up a series of universities that would be a real credit to the land.

The early history of the State universities, for reasons which Mr. Ten Brook has made amply obvious, has not been without its vicissitudes. In several of the Western States the work of moulding the educational policy fell into the hands of narrow and inefficient men. In such instances a short-sighted policy was pursued. For the sake of immediate results lands were often sacrificed for a mere pittance, when by patiently holding them an ample endowment might have been secured. In other cases the lands fell into the control of corrupt men, whose only interest seems to have been to use their opportunities for their own advantage. In almost every instance too great haste has been shown to dispose of university lands, and to get the university into working condition.

After tracing the vicissitudes of the respective land-grants, Mr. Ten Brook has treated much more at length the history of the University of Michigan. Indeed, it is to this history that a greater part of the volume is devoted. For this the reader will be grateful, inasmuch as the University of Michigan has been the most successful of State universities, and, for this reason, has the most valuable lesson to teach.

The educational spirit manifested in the early history of Michigan is worthy of great admiration. Care was taken

from the very first to make the most ample provision for schools. As early as 1827, four years after the organization of the legislative council, an act was passed requiring that "every township containing fifty families should provide themselves with a schoolmaster, of good morals, to teach children to read and write, and to instruct them in the English and French languages, as well as in arithmetic, orthography, and decent behavior, for such terms as shall be equivalent to six months for one school in each year"; that "every township containing one hundred families should provide for a school for an increased length of time"; and that "every township containing two hundred families should be provided with a grammar schoolmaster of good morals, and well instructed in the Latin, French, and English languages." These provisions, which remind one so forcibly of early New England, were strengthened by a penalty levied in case of failure and paid over to the schools which had complied with the law. Eight years later, when the Territory applied to Congress for admission as a State, we find the same spirit embodied in the ~~stitution~~. Instead of imitating the example of the other States of the Northwest Territory, by granting section sixteen of every township to "each township respectively for the use of schools," Michigan kept the fund as a unit, and administered it for the good of the schools as a whole. The difficulties under which the other States have labored have been almost innumerable, owing to the fact that in many of the townships the fund has been mismanaged, or even dissipated altogether. In Michigan, on the contrary, a distinct department of public instruction was created, and the administration of the school-fund was intrusted to its boards. The result has been the establishment of a very large permanent fund and the erection of a school system which may challenge comparison with that of any other State in the Union.

Still more marked, if not more important, were the early provisions for a university. In 1817, ten years before the adoption of the law above referred to, providing for common schools, the Territorial government passed an act to establish the "Catholepistemiad, or University of Michigania." The act itself is a curiosity in the history of education. It not only

provided for the establishment of "thirteen Didaxum or Professorships," but it indicated the manner in which the university was to be supported. It declares that for this purpose, "the existing public taxes are hereby increased *fifteen per cent*, and from the proceeds of the present and of all future public taxes, fifteen per cent are appropriated for the benefit of the Catholepistemiad or University." Still further, in imitation of the means by which the College of New Jersey had secured an endowment, the university was authorized "to prepare and draw four successive lotteries, deducting from the prizes of the same fifteen per cent for the benefit of the institution." Four years after the adoption of these extraordinary provisions, a supplemental act was passed appointing the trustees, and determining the general policy of the university. Section five of this act was the most important, inasmuch as it gave to the institution its place in the school system of the Territory, and determined its policy in matters of religion to be precisely identical with that of the common schools. It provided that the trustees of the university "might from time to time establish such colleges, academies, and schools dependent upon the university, as they might think proper; made it the duty of the trustees to inspect such colleges, academies, and schools; to examine into the state and system of education and discipline therein, and to make a yearly report; to ordain rules for the government of the institution not inconsistent with the laws of the United States or of the Territory; and to appoint a president and professors and to remove them at pleasure." It further provided that "persons of every religious denomination were capable of being elected trustees, and no person, president, professor, instructor, or pupil, was to be refused admittance for his conscientious persuasion in matters of religion."

From this early legislation, two very important conclusions may be drawn. The first is that in the very earliest history of the State the importance of a great university was earnestly felt; and the second, which is really of still greater moment, is that the government was in the hands of men who fully appreciated the importance of building up the school system, not in parts, but as a whole. The influence of this early

direction of public opinion in the Territory it is impossible to value too highly.

When the State was admitted to the Union, in 1837, the Constitution provided for the appointment of a State Superintendent of Public Instruction. To the great advantage of the cause of education, the Rev. John D. Pierce was appointed to the position. Indeed, no better appointment could have been made. We do not know how any one can read the early Reports of this superintendent without greatly admiring the breadth, the enlightenment, and the genuine wisdom with which they are filled. The University of Michigan is not the product of any one man; but if we were called upon to designate the one to whom in our opinion it owes most, we should say, without much hesitation, it was Superintendent Pierce. Educated at Brown University, he had early devoted himself to the study of educational systems, and had become a great admirer of the system of Prussia. The details of this system were his chief guide in framing the system which he recommended for Michigan. His first Report was laid before the Legislature on the 5th of January, 1837. It sketched with considerable fulness of detail an outline of what the system of education in the State should be. After developing at length the subject of the lower and intermediate schools, the report treated with especial fulness the organization of the university. Three departments were recommended, precisely those which were afterwards established. After maintaining that schools of law and medicine should be established as parts of the university, the superintendent treats the subject of theology in the following terms:—

"But whatever may be the advantages of such a connection, it is not to be expected that the study of theology as a profession can ever be made a separate department of the university. There is no connection, and it is devoutly to be hoped there never will be, between Church and State under our government. We have, therefore, no establishment, and consequently no ministry to provide for it. The different denominations, being left free in the exercise of their religions, are at liberty to adopt such measures for the training of the ministry of their respective churches as they may deem most desirable. The control and management of this business of right.

belongs to them ; and it would be usurpation on the part of the State to assume to interfere in its direction. But so far as the great principles of the science of theology are concerned, they necessarily come within the compass of that general knowledge with which every well-educated young man ought to be acquainted. The mighty evidences of the divine existence, resulting from the unnumbered manifestations of contrivance and design throughout the universe of matter and of mind, and the basis on which Christianity has reared its stupendous fabric and founds its claims to the confidence and affection of the world, would be fruitful topics for the predilections of such a professorship as is proposed to be established. Besides, it will be found to be essential to the prosperity of the university. Without something of the kind it would be abandoned by all religious denominations. We should then have presented to our view the spectacle of a university on the broadest foundation, and splendidly endowed, but without students ; while private institutions, struggling for existence, with comparatively few advantages, would be filled to overflowing. As Christianity is the religion of the people, it must be recognized as coming within the circle of general knowledge, though they will suffer no interference in the formation of their religious opinions. It is all important to secure the interests of the great body of the people in the welfare of the university. But the great mass of them will be found attached to the different denominations of Christians. Nothing, therefore, should be done to excite jealousy or create alarm. And it is equally important that no religious test be introduced, but that every individual be left free in the exercise of his religion, and to worship as his conscience shall dictate. No flourishing institution can be found which does not embrace so much as is here proposed ; every attempt on a different plan hitherto made has proved an entire failure. . . . In respect to the assertion that State institutions do not and cannot flourish, it may safely be affirmed that the history of the past proves directly the reverse. The oldest and most venerable institutions in our land are emphatically State institutions ; they were planted, came up, increased in stature, and attained to the maturity and vigor of manhood, under the guidance and patronage of the State. There have been no failures, except in the cases named, and obviously for the reason assigned. The same is true of nearly all the celebrated European universities ; they are state institutions, founded, sustained, and directed by the state. It is all important that the University of Michigan, in its constitution and order, be such as to secure the confidence of the liberal minded of all denominations, and then it may be expected that they will give it countenance and support."

Another part of Superintendent's Pierce's Report we cannot refrain from quoting, as it touches in energetic language upon a subject to which we have already referred. On the subject of granting charters for private colleges, he says :—

" When this decision is finally made, it will not require the inspiration of a prophet to determine whether the State shall eventually assume the first rank in the republic of letters by founding and rearing up an institution of noble stature and just proportions, worthy alike of the State and of learning, and equally worthy the name of university, or whether the State shall ultimately sink to a low level in the world of knowledge, having institutions under the imposing name of colleges scattered through the length and breadth of the land, without funds, without cabinets, without apparatus, without libraries, without talents, without character, and without the ability of ever maintaining them. If one is granted, others must be, and there is no limit. If one village obtains a charter for a college, all others must have the same favor. In proportion as they increase in number, just in that proportion will be their decrease of power to be useful."

It is curious to note, moreover, with what pains Superintendent Pierce reinforced his recommendations on this important subject. He had procured the opinions of several of the most prominent educators on the question. In answer to his inquiries, President Wayland had replied : " So far as I am qualified to judge, the plan of concentrating your energies in one university is incomparably preferable to that of granting university charters to an indefinite number of private institutions. By a great number of small and badly appointed colleges you will increase the nominally educated men, but you will decrease the power of education, because it will be little else but the name." To the same question Mr. Everett replied : " I should think one institution of a high order would be as much as you could expect to found and sustain. You will not understand me," continues he, " as at all underrating the importance of academies and schools. I deem them quite as important as colleges. But it is not useful to grant to academies and schools the privilege of conferring degrees. If the question is between one well endowed and amply provided institution and several languishing on an inadequate public and

private patronage,—which, if several are attempted, will be apt to be their condition,—it is scarcely necessary to say the decision must be for the former.” President Brown, of Pennsylvania, wrote that “the Legislature should guard against an undue multiplication of colleges, and that in order to do this no charter should be granted to any association, except on condition of having procured such an amount of funds as will procure respectability by supplying able professors and the proper college accommodations.” President McIlvane wrote that Michigan had “a noble opportunity of taking and holding dignified ground on this subject; of building a breakwater against the winds and waves, by which other less independent institutions are in danger of being overwhelmed”; and concluded by recommending that this opportunity “be improved by having but one place of degrees in Michigan.”*

The policy so vigorously advocated by the first superintendent was sufficient to prevent, for the most part, if it did not absolutely prevent, that multiplication of colleges which has been the bane of higher education in the other States of the Northwest.†

The next great step in the history of the University was to emancipate it from the control of the Legislature. Unfortunately this was not completely done, but it was so nearly accomplished that the Board of Regents became substantially independent. In 1840 a select committee was appointed to inquire into the condition of the university, and to ascertain what steps were necessary, if any, to insure its full and permanent success. The report of the committee is of great length, and discusses many subjects of importance. It refers to the fact that no State institution has prospered so well as

* Shearman, “Public Instruction and School Law,” p. 40.

† In addition to the credit of having outlined so admirably the policy of the university, Superintendent Pierce is also entitled to the praise of having saved it at one time from financial ruin. The State law required that the architect’s designs for the buildings of the university, after being adopted by the Board of Regents, should receive the approval of the superintendent. At a time when the financial condition of the university looked especially hopeful, a plan was adopted by the Board of Regents which, if carried out, would, by its magnificence, have completely swamped the institution. Fortunately, it received the unexpected *veto* of the superintendent, and thus more than half a million was saved, at a time when the whole fund did not greatly exceed that amount.

some of the independent colleges, and ascribes it for the most part to the manner in which State universities have been controlled. The following extract from the report is of great interest, inasmuch as it gives, not only the views of the committee, but also the policy which was adopted, and which accounts in great part for the prosperity of the University of Michigan. We think it will hardly be denied that there is embodied in its crude rhetoric a great amount of educational wisdom : —

“ State institutions have fallen into the hands of the several legislatures, — fluctuating bodies, chosen with reference to their supposed qualifications for *other* duties than cherishing literary institutions. When legislatures have legislated directly for colleges, their measures have been as fluctuating as the changing materials of which they are composed. When they have acted through a board of trustees, under the show of giving a representation to *all*, they have appointed men of such discordant and dissimilar views, that they never could act in concert, so that whilst supposed to act for and represent *everybody*, they, in fact, have not and could not act for *anybody*. Again, legislatures wishing to retain the power of the State in their own hands, have not been willing to appoint trustees for a length of time sufficient for them to become acquainted with their duties; to become interested in the cause which they were appointed to watch over, and to feel the deep responsibility of the trust. A new board of trustees, not knowing well what to do, generally begins by undoing and disorganizing all that has been done before. At first they dig up the seed a few times to see if it is going to come up, and after it appears above the surface, they must pull it up to see that the roots are sound, and they pull it up again to see if there is sufficient root to support so numerous branches, then lop off the branches for fear they will exhaust the root, and then pull it up again to see why it looks so sickly and pining, and finally to see if they can discover what made it die. And as these several operations are performed by successive hands, no one can be charged with the guilt of destroying the tree. Thus has State after State in this American Union endowed universities, and then, by repeated contradictory and over legislation, torn them to pieces with the same facility as they do the statute book, and for the same reason, because they have the right. . . . The university is too sacred to be made the foot-ball of party. If it sinks once, life will be extinct before it will rise again. To secure to the university, and thereby to the State, the benefit of a Board of Regents having

experience and enjoying the confidence of the entire community, and having time and opportunity to carry out the noble plan that has been devised, the committee herewith submit a bill. It proposes to exempt this subject from becoming a prey of politics ; to give permanence and thereby efficiency to the board charged with executing the great work of rearing a university with dependent branches ; and to put upon this permanent board of well-known individuals the *entire responsibility* of accomplishing this work. . . . What the Legislature should attempt in reference to the university is, in the opinion of the committee, to put the whole subject into the hands of competent men, leaving it with undivided responsibility on their shoulders, and then the Legislature not meddle with it again except to protect as guardians, not to destroy as capricious despots. Repeated legislative interference, known by experience to be the ruin of a cause like this, would soon dishearten every regent who takes an interest or active part in the duties of his office. . . . The duties of the regents, in their turn, will be mostly to provide the means and apparatus, and the like, and fill the several faculties with able men, and *throw the undivided responsibility of carrying on the work of education on them*. The further duties of the regents are only to watch and defend, and not to interfere with the growth of what they have planted. A board of experienced regents can manage the funds of the university better than any legislature ; and the faculty can manage the business of education — the interior of a college — better than any regents.”

No formal action on this report seems to have been taken, and yet the policy which is so vigorously set forth in it became the general policy of the university. From the first the institution was kept in the hands of a Board of Regents, appointed for the special purpose of directing and controlling its affairs. From the first, also, its interior workings were conducted exclusively by the respective faculties. To this separation of powers, and this absence of officious interference, very much of the prosperity of the university is to be attributed. During a portion of the history of the institution the regents have been appointed by the governor, during a portion also they have been elected by the people ; but whether elected or appointed, they have practically given to the faculties entire control of the work of instruction and discipline, while they have strenuously resisted all interference of the Legislature in the

administration of the finances and the appointment of professors. Their policy on this last point is well illustrated by their treatment of the legislative provision requiring the appointment of a professor of homœopathy in the School of Medicine. For nearly twenty years a law requiring such an appointment has been upon the statute-books of the State. But the regents became convinced that such an appointment would greatly injure the Medical School, if, indeed, it would not utterly destroy it. They therefore resisted the law, and defended their resistance on the ground that the Constitution gave the general management of the university into their hands, and not into the hands of the Legislature. Two attempts to overthrow this defence in the Supreme Court failed ; and it was not until after the Legislature had made special provision for a separate and distinct homœopathic school, that homœopathy gained a foothold in the university.

In one respect, however, the institution has not been free from the embarrassments rising from legislative control. Though in the direct management of the institution the Legislature has had no voice, yet in the care of its lands the same exemption was unfortunately not provided for. The legislative dealings with the early financial history of the university more than justifies the language used in the report above quoted concerning the dangers of legislative interference. Though of late the Legislature of the State has manifested a wise and generous policy toward the university, yet it is entirely erroneous to suppose that the institution owes its prosperity thus far to any financial assistance it has received from the State. Mr. Ten Brook has very clearly shown that, were a balance to be struck to-day, it would be found that the university fund has been injured by unwise legislation far more than it has been augmented by direct appropriations. A few facts will be enough to show the justice of this comparison.

The Congressional act of 1826 gave to Michigan the right to locate its university lands in detached portions. This privilege, which at the time was exceptional, was turned to so good account that, ten years later, Superintendent Pierce, in his first Report, estimated the value of the lands at not less than \$20 per acre. Nor does this estimate appear to have been extra-

gant; for, in the following year, when lands of no exceptional value were offered for sale, they brought an average price of \$ 22.85 per acre. But immediately after this promising beginning a series of legislative acts followed, which brought great embarrassment to the Board of Regents. The first of these acts, approved in 1838, authorized the release of sixteen sections of land that had been located in 1830. The conditions of the releasing act were, that Congress should grant the same number of sections elsewhere, to be estimated by a person named in the act, to be of equal value less the improvements that had been made by actual settlers. The object of the act was to secure titles to settlers who had planted themselves on lands belonging to the university. The very fact that the lands had been so occupied was sufficient evidence of their great value, and it was absurd to suppose that in 1838 government lands could be located which would equal in value the best that had been located in 1830. Yet the Legislature did not hesitate to sacrifice the interests of the university for those of the settlers, though the latter had no claims whatever to the lands. A still more remarkable instance of a similar kind occurred in 1839. A bill was introduced "for the relief of certain settlers on university and State lands," proposing, on certain conditions, difficult to be defined, to sell to such settlers the lands which they occupied at the government price of \$ 1.25 per acre. This, it should be remembered, was two years after the Superintendent had estimated the value of the lands at \$ 20 per acre. Now the Legislature proposed to sell the best of the lands at \$ 1.25. Against the bill the Board of Regents remonstrated, but with out effect. It passed both houses, and went to the governor for his approval. The event was a crisis in the history of the university. If the action of the Legislature should be sanctioned by the governor, the university would be ruined. Governor Mason was but twenty-seven years of age. Every political interest would seem to have urged his approval of the measure. If he had given it his sanction, the university would have been quickly deprived of the means of life, and would have been in the future of no more consequence in education than any other of the two hundred colleges of the Western States; no one, moreover, would have thought ill of the governor for his ap-

proval. But the first paragraph of his message shows how far he was above all personal motives :—

"I return without my signature, to the house in which it originated, a bill entitled 'An Act for the relief of certain settlers on university and State lands.' In refusing my sanction to the provisions of this bill, I am governed by an imperious sense of public duty, urged upon me by the solemnity of my official oath. The determination I make is a painful one. It has been formed, however, after mature and anxious deliberation, and cannot be resisted."

This veto saved the university. Next to the first Report of the first Superintendent of Public Instruction, it should be regarded as the most precious document in the archives of the institution. When the university hall comes to be properly adorned with the memorials of the founders and benefactors of the university, if the statue of Superintendent Pierce shall be thought entitled to the first place, that of Governor Mason should certainly receive the second.

But notwithstanding the temporary relief afforded by this veto, the Legislature persisted in tampering with the prices and sales of the lands. By an act of 1840, nearly five thousand acres were sold at an average price of \$ 6.21 per acre, the whole sum realized making an aggregate of somewhat more than \$ 78,000 less than these lands would have brought at the average price of the sales thirteen years before. As Mr. Ten Brook has remarked, this sum seems to have been paid as a premium for squatting upon the lands without buying them. But not content with this, the squatters demanded and received still greater favors. In 1842, the minimum price was fixed at \$ 12 per acre, and *was even made retrospective*. The superintendent's report for the following year shows that \$ 34,651 were actually returned to purchasers either in money or credits. The sales up to that time had amounted to some \$ 220,000 ; and yet, by means of this retrospective legislation, the sum realized was \$ 93,000 less than it otherwise would have been. If it be urged, in extenuation of this act, that the severity of the times made it necessary that the settlers should have relief, the rejoinder is, that the relief should have been afforded by the State, and not have been extorted from the university. The great care with which the lands had been located, as well

as the experience of the superintendent in securing sales previous to the tampering legislation of 1838, warranted the belief that at no very remote period the whole of the lands could be sold at an average price of not less than the minimum which had been originally established. This result, probably, could not have been reached at once, but there is good reason to believe it could ultimately have been attained. This would have given to the university a fund of not less than \$ 921,000. It was on the expectation that at least this sum would be realized that the early plans of the regents were laid ; and yet the persistent tampering of the Legislature, as here indicated, was enough to reduce the fund to about \$ 450,000, or less than one half of the amount above named. Whether in the heart of this unfortunate legislation there was any corrupt motive or not, the series of enactments, as a whole, affords an excellent illustration of the danger of submitting even the financial affairs of a university to legislative control. During the past years the Legislature has made liberal appropriations, but it has not yet by any means repaid the damage done by its early enactments. It requires but a very simple computation to show that, had the policy of the regents never been interfered with on the one hand, and had the Legislature never made any appropriation for the university on the other, the institution would now have been far richer than it is. But we are not without faith that the Legislature will yet repair the injury inflicted by its early indiscretions. Fortunately the injury was of such a nature as to be easily remedied by so ample a treasury as that of Michigan.

We have already remarked that in the design of the first superintendent the university was to be an integral part of the school system. In furtherance of this design, ten branches of the university were early established in as many different parts of the State. These branches were sustained largely from the university fund. They took the rank and did the work of preparatory schools. They were under the direction of the university itself ; and consequently the quality of instruction given was of a high order. Their influence in helping to establish an excellent standard of intermediate instruction in the State must have been considerable. But the time came when the university fund could no longer endure the depletion

which these schools required. We have seen how the financial anticipations of the first superintendent were disappointed. As it became apparent, moreover, that the treasury of the university was to be inadequate to the demand, it was also found that the branches were not altogether fortunate in their location. In the rapid growth of the State, new towns had sprung up, which in many instances had come to exceed in importance those to which in the beginning they had been vastly inferior. The new towns established high schools, and the branches of the university declined in relative importance. These adverse influences finally severed the official bond between the university and the schools. Fortunately, however, this act of severance did not take place until the branch schools had done an important work. They had given to the high schools a model, and they had kept the field clear of private academies. If the remark often made by careful observers be true, that no State in the Union has greater reason to be proud of her high schools than has Michigan, the fact is largely owing to the early influence of the branches of the university.

The present relations of the university and the high schools form one of the most interesting features of the educational system of Michigan. Though the university has no authority over the schools, yet there exists a semi-official bond of union between them. They have, if we may use the figure, entered into diplomatic relations by which both parties are benefited. These relations have been imitated in some of the other States, but, so far as we know, the University of Michigan is entitled to the credit of having inaugurated what may now fairly be called a system. The following notice, published annually in the University Calendar, will convey to the reader an adequate notion of the relations to which we refer: —

“A committee of the Faculty will visit, once every year, any public high school in Michigan, on request of its school board, and report its condition to the Faculty. If the Faculty shall be satisfied from such report that the *Preparatory Courses of Study* in the school thus visited embrace all the subjects required for admission to the university, and are taught by competent instructors, then the graduates from such *preparatory courses* will be admitted to the Freshman class of the university without examination. They must present to the

president, within three months after their graduation, the diplomas of their school board, certifying that they have sustained their examinations in *all* the studies prescribed for admission to one of the three courses, Classical, Scientific and Engineering, or Latin and Scientific. They will also be required to appear at once in their classes, otherwise they can be admitted only after examination. The privilege of admission on diploma is limited to public schools in Michigan, and their school boards must make the application annually."

A careful inspection of the conditions embodied in this *Notice to Preparatory Schools* will show that the system is guarded at every point. As it now stands, it is the result of experiments continued through several years. If the system occasionally admits a student to the university who on examination would be excluded, or admitted only under heavy conditions, this disadvantage is probably far more than counterbalanced by the general influence which the university is able to exert on the schools as a whole. The only objection which, so far as we have ever heard, has been raised to the system, is one which might with equal propriety be raised against the system that prevails in Prussia. Doubtless many are admitted to the German universities on diploma from the *gymnasia*, that would be excluded were they required to pass an entrance examination ; and yet in no other country are the mass of students so thoroughly prepared for their university work. No great university can afford to forget that a part of its work is the elevation of the preparatory schools.

We cannot take leave of this subject without remarking that the schools of Michigan appear to be more perfectly organized than are the schools of any other State in the Union. The common-school fund, as we have already remarked, is unusually large. The high schools are prosperous, and are inspired by a vital connection with the university. The university itself during the past ten years has annually brought together about twelve hundred students. The policy of the State, moreover, is on the whole liberal. Within the past few years the Legislature has provided for the assessment of a regular tax for the support of the university ; and during the past winter special appropriations were made for the establishment of three distinct departments. Large additional appropriations will indeed

yet be needed, but the State is rich, and, it is hoped, will be not ungenerous. Best of all, the system is free from the embarrassment of complicated surroundings and distracting jealousies. In this respect it has no superior and probably has no equal. If, under all these favoring conditions, a policy of comprehensive liberality is followed, the cause of higher education in Michigan seems to us to have every possibility of greatness before it. Let the State appreciate her opportunity, and she may yet be the first to furnish a truly great university in America.

CHARLES KENDALL ADAMS.

ART. VI.—CRITICAL NOTICES.

1.—*The History of the Invasion of the Crimea.* By ALEXANDER WILLIAM KINGLAKE. Vol. V.

IN the fulness of time, the fifth or “Inkerman” volume of the History of the Crimean War has made its appearance. Twenty years have elapsed since the occurrence of the events which this volume relates; eleven since the publication of the first volume aroused a storm of criticism, by comparison with which the excitement created by the Greville memoirs seems tame.

Much that was then said and written has been forgotten, and perhaps the only recollection of it retained by the reading public is, that bitter prejudices render Mr. Kinglake an untrustworthy historian, and that, except as a brilliant piece of dramatic writing, his history is of little value. Perhaps, therefore, it would be well before beginning the perusal of this last volume to recall the objections urged against the earlier portion of the work, to see how far, in the light of recent developments, they are well taken. Deducing from this examination the canons by which the fifth volume is to be tried, we shall be better prepared to decide whether or not it really is—what the author undoubtedly wishes it to be—a valuable contribution to historical literature.

On September 10, 1854, the allied fleets were at anchor off the coast of the Crimea, when a small steamer was seen approaching from the direction of Constantinople. Rumor was rife; thousands of busy

tongues were full of conjecture as to her errand : "She brings news of peace"; "She carries orders from home." Wrong; she only carried a few English gentlemen, who were anxious to be spectators of the landing. They were heartily welcomed by Admiral Dundas and Lord Lyons, and from the maintop or the quarter-deck witnessed the busy scene. One of the party, however, was not satisfied with this. He landed, bought himself a vicious little pony, and making the acquaintance of the commander-in-chief joined his staff on the morning of the 20th. He kept close to the English general throughout that eventful day, dashed through the Alma, rode beyond the skirmishers, mounted the celebrated knoll, saw the battle with his own eyes, and dined with Lord Raglan on the evening of the victory.

This enthusiastic amateur was Alexander William Kinglake, barrister-at-law, author of "*Eôthen*," and a few months before engaged in the active practice of his profession. In his subsequent intimacy with Lord Raglan he won the latter's friendship, confidence, and esteem; this fact, joined to his literary reputation, naturally led to his becoming the chosen historian of the war. The English general's papers were placed in his hands, while from all quarters there was sent to him a mass of rough material, whose constantly increasing bulk, joined to the author's strict conscientiousness in the examination of evidence, greatly impeded the completion of the work. All England was aware of the ample materials he had at his disposal, and looked eagerly for the promised book. For eight years its coming was delayed. In 1863 the first volume made its appearance with the explosive effect of a can of nitro-glycerine.

Possessed in the highest degree, both by the natural bent of his mind and by the practice of his profession, of that critical faculty which strips off the outer trappings of every phenomenon, having before him a field where blunders many and gross had been committed, Mr. Kinglake found raw spots on every side of him and scarified them all. He attacked the ruler of France and his associates with a bitterness and force which made the most venomous outpourings of banished Frenchmen seem harmless. He depicted the English government and people as led by the nose, obedient to the will of "the crafty conspirator of the Elysée." He described a Royal Duke as hesitating in the presence of the enemy until urged on by his subordinate. He told of a general-of-division who refused to wear glasses, although so near-sighted that, when placed on the right of his line of battle, he could not see its left. He exhibited his favorite statesman, the "lusty" Palmerston, as exercising such a sway over the minds of his colleagues that they moved "as from the first he

had willed it." He penetrated the secrets of the London Times and gave a glowing account of its origin, growth, and interior mechanism, which, whether true or false, was a revelation of Eleusinian mysteries little pleasing to that august journal. He depicted the entire cabinet of the great English nation as dozing away after a Richmond dinner and passing resolutions of whose purport their somnolence rendered them ignorant. No wonder that upon the appearance of his first volume the critics fell upon it with beak and talons. The diplomatic defence against his charges appeared in the Edinburgh Review, the cabinet defence in the Home and Foreign Journal, while under the supervision of the short-sighted general the Quarterly attacked him with vigor. The "Thunderer," in a review which dragged its slow length along for three months, bombarded him with twenty-two columns of solid type.

"He was no true Englishman or he would not speak as he did of the government and people"; "he was no gentleman, or he would not attack our faithful ally"; "he was impudent, or he would not degrade the historian's pen with petty details of personal appearance, and would not call Sir George Brown near-sighted." Moreover, a host of smaller critics, anonymous and otherwise, buzzed away in every daily journal, each with his correction or complaint. One passage after another was nailed as a falsehood, and the book denounced as a pack of lies. To such an extent was criticism carried, that the commentaries soon became as voluminous as the work itself; while the Quarterlies not affording room enough, Sir Francis Head (an ingenious gentleman who once propounded the theory that no lessons in the art of war could be derived from the insignificant contests which took place before the invention of gunpowder),* feeling an irrepressible desire to say something, said it in a book of his own. So exhausted was the subject by the time his pamphlet appeared, that he was forced to attack Mr. Kinglake because he did not give unstinted praise to all who had furnished him with materials for his work, and because he wore spectacles, while to this high-toned reviewer it seemed a "conceited assumption of intimacy" on the author's part to speak of Airey and Buller and Codrington without giving them their titles. Surely criticism could go no further.

The battle, however, was by no means one-sided. W. Blackwood & Sons were the publishers, and old Maga plunged into the fray in

* In this he is opposed to pretty good authority. Napoleon Bonaparte recommended the campaigns of only seven generals as necessary to be studied by an officer; three of these were Alexander, Cæsar, and Hannibal.—*Mélanges Historiques*, Vol. II. p. 10.

defence of the author. The North British followed suit, so did the Examiner, while the Saturday Review most condescendingly patted him on the back ; and to meet pamphlet with pamphlet, "An old Reviewer," grown gray in quarterly strife, replied to Sir Francis Head. The nails were drawn out of some of the falsehoods, and they were found not to be lies after all.

Amid this storm of criticism, which not only attacked the literary work, but charged deliberate falsehood, what did the author do ? No abuse however virulent wrung from him an answer before he was ready. Like that grim and silent Eidolon, which, under the name of "the Great Eltchi," he had so forcibly depicted, he "bided his time." He avoided any reply through the press, and kept silence till his second edition made its appearance, quickly followed by the third and fourth. With a few words of preface there appeared a copious mass of notes, and then through the dust of controversy could be seen the result of the conflict. There were some trivial errors in spelling names ; in describing feathers as being seen on a hat which was really plumeless, and similar small mistakes, but no misstatement of an important fact had been brought home to him. On one or two points (an instance will be given further on) the question of fact was still in dispute. There was good authority on both sides ; Mr. Kinglake thought one way, others another. So thorough had he been in sifting the mass of evidence before him, so candid in stating what was said on both sides of disputed questions, and so guarded in his language where the subject was in dispute, that after the utmost efforts of his assailants, his statements of fact remained unshaken. After making proper allowance for a certain peculiar manner of treating historical characters (described below), his work as a record of facts was found to be trustworthy.

As years rolled on men watched eagerly for his second instalment. It was known that this would contain the account of the charge of the Light Brigade at Balaklava ; and while its coming was delayed, it seemed as though the author were keeping two noble lords of highly sensitive natures like rats in a cage. Upon its appearance, in 1868, it met with a much better reception than had been accorded the first two volumes. His former critics did not make so fierce an onslaught on his statements of fact, but more prudently confined themselves to attacks upon his deductions and his style. There were also certain causes, inherent in the subject itself, which seemed calculated to make this pair of volumes a better history than their predecessors, and which, in like manner, make the Inkerman volume the best of all.

With this preliminary sketch of Mr. Kinglake's book, we will now turn to a consideration of the objections which have been taken to it.

I. Filling as he does the rôle of Lord Raglan's chosen historian, our author is in that awkward predicament, which Macaulay once described as the position of a certain biographer of Warren Hastings, — a party to a contract whereby the hero's family covenant to furnish papers, and the author to furnish praise. So long as his efforts are confined to representing Lord Raglan as a high-toned, pure-minded, and honest English gentleman, there is nothing to be said ; he is simply stating the truth. It is, however, charged against him that he endeavors to represent his hero in the light of a great general. To this criticism Mr. Kinglake seems obnoxious, and he must be left to the tender mercies of the military reviewers. The blemish, however, is a slight one, for in the attempt to write up his hero's military talents he has conspicuously failed. This seems one of those instances constantly occurring in the book where his natural bias is overcome by an overpowering force, which compels him to tell the whole truth. He labors with the skill of a special pleader to convince us that Lord Raglan was a great general, and at the same time recounts events utterly inconsistent with any such hypothesis. His arguments have convinced no one, nor is his hero regarded as a greater general now than he was before the book appeared. In the language of one of Mr. Kinglake's most friendly critics, Lord Raglan's military genius is about on a par with that of Prince Schwartzenberg. In fact, the annals of European history hardly furnish an example of a war which lasted so long with so small a display of military skill, save in the single department of the engineer, on the part of any of the combatants.

II. The next and most serious charge is that Mr. Kinglake's prejudices are such as to render him unfit to fulfil the duties of an historian. His hatred of Louis Napoleon, amounting almost to a feeling of bitter personal animosity, and extending to all who had been associated with him in the *coup d'état*, and his poor opinion, openly expressed, of the whole French army, its *personnel* and its discipline, incapacitated him, it was said, from giving a fair account of any transactions in which they had taken part. This bitter feeling seemed utterly inexplicable to some of his critics, but the explanation is simple. He has a passionate love for that abstract entity which men call justice, and he is an Englishman of the English. He saw with his own eyes the work that English soldiers did in the Crimean War, their steady, unflinching courage, their patience under suffering, the dogged obstinacy with which they fought, and the

large share of the conflict they bore. Knowing these facts, he began to write his history at a time when the universal voice of Europe accorded to France and to France alone the honors of the siege. The French had saved the English from destruction at Inkerman, the tricolor had floated from the flag-staff of the Malakoff, while the gallant band, which advanced from the English trenches, was driven back, or lay cold in death on the slopes of the Redan. The English died like dogs in their miserable camp for want of provisions, of medicines, and of blankets, while the French commissariat (so it was said) was abundantly supplied with necessaries. The charge of the Light Brigade was highly praised, qualified with Bosquet's sensible criticism, "C'est magnifique, mais ce n'est pas la guerre"; but the gallant deeds of Scarlett's Heavies, the sterling services at the Alma and in the trenches, were dismissed with a few words of perfunctory praise. At the conclusion of the war Prince Napoleon gave a dinner to the French generals, who had made the campaign, and in the voluminous reports of the speeches, as they appear in the columns of the *Moniteur*, not a single allusion is made to England or the English. The inimitable Leech made this the subject of a cartoon in "Punch," wherein a number of frogs in the uniform of the French army are represented as engaged in a game of leap-frog with a British lion, who, benignly smiling, seems quite undisturbed at the performance. Among this placid animal's whelps, however, there was one whose blood boiled at this state of affairs, and who, telling the story of the war, undertook the task with a keen desire to obtain justice for his country from Europe and the world. Did this feeling so bias his judgment as to render him an unfair critic of the French army?

We hardly think so. It is to be regretted that his story is not brought down far enough to give an account of the storming of the Malakoff or of the sanguinary struggles in front of the Flagstaff Bastion. These were the most prominent feats of the French during the siege. In describing the charge of the Chasseurs d'Afrique at Balaklava, and in many places throughout his fifth volume, he certainly gives them full credit. It is not of the *corps d'élite* that he complains, but of the bulk of the army. In the light of past events his criticisms seem eminently just. That vicious system, which sacrificed the *personnel* of the whole army to a few regiments, which thus became "as the spear-head to the spear," bore its fruits, when with the destruction of the choice troops at Woerth and Gravelotte the French army went to pieces.

The high reputation of the French army at the time of the Cri-

mean War rested mainly upon its inherited traditions. The basis of these very traditions was not rightly understood. The views of those writers who had given the key-note to European opinion were not derived from a sufficiently extended scrutiny of facts. They were largely ignorant of its internal constitution. There have been (and still are) two schools of writers on this subject. The first comprises those who believe that Napoleon Bonaparte as a military man never made a mistake, and possessed a genius for organizing armies which insured perfection. The second includes those who, continually decrying his military abilities, attribute his long career of victory to the superior quality of the materials he had at his command. Between these two classes of writers there has of late years arisen a new school of critics, who take a middle ground, and seem to be nearer the truth than either of the others. In support of their theory they appeal to evidence at first hand, given by those who, without any temptation to disguise the truth, simply told facts which they were in a position to know. The careful study of such works as the memoirs of De Fezensac and Von Brandt has rudely dispelled the ideas so generally prevalent of the high temper of the grand army, that wonderful weapon, which, forged in the camp of Boulogne, beat banded Europe to the dust, till, worn thin with use, it snapped in the hands of the redoubted chief who wielded it.

The first French imperial army was not what it has been supposed to be, nor did the Algerian campaigns of its successor tend to its improvement. Mr. Kinglake's book gave a shock to generally received opinions when it first appeared, but time has shown the justness of his estimate. The criticisms, which in 1864 were denounced as the ravings of a partisan blinded by jealousy, are received in 1874 as simple statements of fact.

On one point in particular it has been asserted by his critics that he let his theory get the better of his facts. In his description of the part bornè by the French in the assault on the Telegraph Heights at the Alma, readers of his first volume will remember his extraordinary story of their first raising a smoke and then firing into it. This description seems irreconcilable with other English accounts, particularly with the evidence of so accurate an observer as Colonel Hamley, as to the state of that part of the field at the close of the battle. It is alluded to here, not for the purpose of discussion, but as an excellent example of Mr. Kinglake's manner of treating those questions of fact which are in dispute. He has evidence in support of his theory, — evidence so strong that it convinced Lord Raglan, — but he is very careful to qualify his statement, and in reading his account of the affair no one is likely to be misled.

With regard to his bitter animosity towards Louis Napoleon, the cause is easily found. It was stated by a reviewer, writing he says from personal knowledge, that Mr. Kinglake began his examination of the history of the *coup d'état* without those strong feelings against its author which he exhibits in his book. The truth of the statement may well be believed. No one can thoroughly study that dark page of French history without a feeling of righteous indignation. To the account of it in the first volume there is nothing to add. Some of the qualified statements of fact (noticeably the suggestions of personal cowardice) may be exaggerated, but the story as a whole is a succession of hard and bitter truths. "Strangled in the night with a plebiscite," France accepted the nephew as she did the uncle, and, although for twenty years he seemed to hold an easy sway, and brilliant Paris gave seeming evidence to its beneficent effects, when his fall dissipated the halo of success which had surrounded him, it was seen that the English lawyer had not been far wrong in gauging the character and capacity of the object of his attacks. Dark though his picture is, impartial history will accept it as nearer the truth than men were prepared to acknowledge when it first appeared.

When all is said, however, in support of Mr. Kinglake's account of the *coup d'état*, it must still be admitted that his fourteenth chapter is a blemish. It is out of place in a history of the invasion of the Crimea. The good old legal rule, *causa proxima non remota spectatur*, should have been remembered before he devoted one hundred and fifty pages to an event in French history, which so far as it was one of the causes which brought on the war could have been discussed with a few lines. We have the promise that in the long-deferred Preface, he will state "the reasons which induced [him] to tell aloud the transactions which brought on the war," and may look forward with keen relish to witnessing the additional thrusts which past events have enabled him to make at his old enemy. At the same time it is very doubtful whether anything he can say will prevent his long digression from marring the artistic beauty of his story.

There is, however, another species of bias which has an influence on Mr. Kinglake's book. It is more insidious and should be guarded against more carefully than his Gallo-phobia. It arises from the peculiar manner in which he constructs his characters, and which for want of a better name may be called the *deductive* method of writing history. It was first pointed out by one of his most friendly critics, and leaves its traces on every page of his book. Seizing on one or more prominent and well-authenticated facts in a person's life, the author constructs therefrom a theory of his character, and, applying

this theory to all the varied circumstances which may occur in his career, is prepared to say how he *will* act, before he learns how he *has* acted. It is in this manner that an anatomist from a fragment of bone will reconstruct the perfect skeleton of some unknown animal. This system was first employed by Niebuhr, when, after demolishing the accepted history of Rome, he had to replace it by a new one. It reduces the author at times to the unpleasant alternative of either abandoning his theory or distorting his facts. Upon Mr. Kinglake it does not seem to have had the latter effect, although it has led to a certain idealization of his characters.

Still another one of our author's prejudices is the ineradicable one of his nationality. Despite the sharp criticism of his countrymen, in which he sometimes indulges, he still exhibits a kindness towards the English generals which is almost ludicrous. Sir George Brown hurries his men on to disaster; he is only "impelled by an irresistible impulse to be first in the fray." Lord Raglan leaves his army to shift for itself, abdicating all the duties of a commander-in-chief, and led "by a golden chance" gallops on to the rear of the enemy's skirmishers, regardless of the great interests which depend on his being in his proper place; "he was not an ideal personage, but a man of flesh and blood with some very English failings." The Duke of Cambridge makes an inconvenient halt: he is "endowed with the personal courage of his race, but of an anxious temperament, liable to be cruelly wrung by the weight of a command, which charged him with the lives of other men." Imagine Mr. Kinglake's comments on similar performances by French generals. The disturbing influence of this national feeling, however, may be looked for in every history, and is not good ground for rejecting Mr. Kinglake's.

Upon the whole there seems to be no more reason why his book should be tabooed on the score of his prejudices, than Hume's because of his bias in favor of high prerogative, Macaulay's for his anti-Stuart feelings, or Carlyle's for his hero-worship. When a writer's bias is known, allowance can be made for it.

III. A witty Frenchman once remarked that if a veteran of the Grand Army in 1814 had been as profusely decorated for his military exploits as were the English soldiers who served in the Crimea, he would have had to trundle a wheelbarrow before him to carry his medals. Similarly it has been said that if all history were written after the manner of Mr. Kinglake, this short life would be inadequate to our learning the events of a single century. The prolixity of his narrative is an unfailing source of ridicule to his critics; there are

unceasing comparisons between his Alma in three hundred pages and Napier's Vittoria in fourteen, with sarcastic allusions to Sydney Smith's antediluvian school of writers. Those who make this objection seem to be laboring under a mistaken conception of the subject. The historian of the Thirty Years' War, of the French Revolution, of any struggle which involves the existence of a nation or a creed, needs some of the qualities of a Michael Angelo. He must give us those bold free strokes which, in a few hasty outlines, shall present the perfect form, leaving to the imagination the task of filling in the details. In relating the history of the Crimean War, a different talent is required. To the English nation, however much it excited their feelings at the time, it was and always will be an episode. It is one of those eighteen-inch cabinet pictures, to paint which perfectly a talent is required exactly akin to Meissonier's. It is not a talent such as the giants of the brush possess, but it is talent, and talent of a very high order. Mr. Kinglake possesses it to perfection. For such a fragment of history as this the time can well be spared to wander through his long pages, while the exquisite finish of the picture amply repays us.

From this point of view the very points which to so many seem blemishes become beauties. His long and detailed accounts of his characters, their history and personal appearance, have been objected to; his picture of General Airey with "his eager swooping crest" was sneeringly compared with the original Airey, a "commonplace gentleman, trotting along on his cob, in the Park." Ceaseless jests were cracked on his description of the same general as putting on a black coat in the evening after a hard day's work with his men in the Canadian woods; but, provided time can be spared to absorb these details, why object to them? If, in the smoke of battle, General Airey became a different being from what he was in St. James's Square, why should we not be told of it; and, if he did put on his black coat, is it not such little traits as this which give the key to a man's character?

So with his long biographies of each individual introduced. They add immensely to the force of the narrative, and give it a dramatic flavor, compared with which most novels seem tasteless. Alexander Elliot has absolutely nothing to do but to follow his leader and cut down a Russian or two; but Mr. Kinglake gives him two pages of biography, and he at once becomes an old acquaintance, so that, when we see him pounding along after Sir John Scarlett, we are ready to exclaim, "See! there goes Elliot, who was in the second Sutlej campaign; don't you remember how, with only five men, he

rode into the Sikh intrenchments at Ferozeshah? He'll make his mark to-day."

So with the charge of the Light Brigade. Every little detail is elaborated with the most scrupulous care. The reader sees the long, smooth, green valley, and drawn up across it, in the far distance, the guns and the black masses of cavalry; he sees the advancing squadrons, and, five horses' lengths in advance, the rigid figure of their leader, with his embroidered pelisse wrapped closely around him; he even notes that the horse has two white stockings, and that the rider sits tall in the saddle; the place and bearing of each man is pointed out, how he rode and what he did; nothing is omitted; so strong does the realization of the scene become that, as he lays down the book, which is not till he has hurried to the end, he is almost ready to exclaim, "quorum pars magna fui." This is Mr. Kinglake's art, the dramatic in its perfection. His characters are life-like; they seem to move and speak. Not even the genius of a Garrick or a Kean could bring us into closer contact with them, if they were presented on the stage.

IV. Mr. Kinglake's battles have been severely criticised. His constant change of scene is said to be a great blemish. One moment we are struggling through the Alma with Sir George Brown; the next far away to the right with Autemarre; now burning in Bourliouk, now on the knoll with Lord Raglan; while he keeps us in cruel suspense on the slopes of the Kourgané Hill to expatiate on the life and times of Sir George Brown and General Codrington, and in answer to the agonizing query, "Where were the supports?" coolly takes us by the buttonhole and informs us that "the Duke of Cambridge is the grandson of George III. and a cousin of the queen."

To write a battle in three hundred pages is perhaps as difficult as to write it in three; and it is hard to please all tastes. Assuming always that there is the time to spare, Mr. Kinglake's mode of narration, giving as it does a detailed account of the actions, not only of brigades, but even of companies and individuals, is by no means so confusing as his critics would make it out to be. There is no better military historian than Napier. His description in half a page of the advance of the fusilier brigade at Albuera is unsurpassed of its kind in the English language, but even with this great writer, no one can thoroughly understand his Vittoria or Salamanca, until he reads the story a second time with the humble aid of a map. If this is tried with one of Mr. Kinglake's battles, it too will be thoroughly understood. Moreover, the time is not all wasted in wading through his three or four hundred pages; they give the reader an understanding

of battles in general which he did not before possess. The author is a civilian writing for civilians, a lawyer presenting a case, and he spares no pains to make his readers familiar with every detail. When a military writer states that such a brigade was "disordered in passing an obstacle," that another "carried the position," he imparts to non-military readers but a vague idea of his meaning. These phrases, however, become instinct with life when Mr. Kinglake points out the actual physical displacement of individual positions, in passing the blazing cottages of Bourliouk, in fording the rapid stream of the Alma, and scrambling up its irregular banks; or describes Codrington leading his brigade straight into the great redoubt, while its slopes echoed with the joyous shouts of the men.

So too with the labored account of the hand-to-hand struggles of Scarlett's "Heavies" in the heart of the Russian cavalry, where almost every sword-thrust is described,—let any one read this and then turn to the few short sentences, thrilling as the trumpet-blast, in which Napier tells how Norman Ramsay and his battery, "the horses stretched like greyhounds o'er the plain," burst through Mont-brun's encircling squadrons at Fuentes de Onoro, and he will find he understands the soldier's description as he never did before. He will then be willing to acknowledge the debt he owes to Mr. Kinglake, who has given him such an insight into mechanical movements on the field as will be of service to him in all future reading.

Among Mr. Kinglake's merits as a writer may be mentioned two:—

I. He possesses in an eminent degree that qualification, so necessary to a military historian, a good eye for country. His topographical descriptions are all that can be desired,—clear, accurate, and complete.

II. Chief among his merits, however, in itself enough to preserve his book, is the marvellous beauty of its style. Although he is said to elaborate excessively, and to rewrite every sentence, the effect is not seen in the easy flow of his facile pen. As one of his hostile critics expresses it, "the lamp, that [has] for so many years shed its light on the work, [has] imparted to it none of its fatal odor." Thackeray and Taine both note as the great charm of Macaulay's writings, that every one who brings his own little stock of reading and observation to the perusal of the book finds therein constant allusions to something familiar, some scrap of quotation, some bit of description, which had almost seemed his own exclusive property. There is a somewhat similar charm about Kinglake. His book is full of a constant succession of images and similes, but they are drawn rather from nature than from books; they are redolent of the open air. No keen ob-

server of nature can fail to be struck by the many comparisons which, dimly formed in his own mind, become clear and distinct only when stated by the author. There is thus in the book, at once, an originality and a familiarity which greatly enhance its charm. That odd grandiloquence of language too, which gives us such expressions as that by which he describes the machinery for moving guns ; — "the engines of all kinds by which man enforces his dominion over things of huge bulk and weight," adds a spice to his style ; while lastly, upon a careful analysis, one great secret of its power will be found to lie in that unfailing source of beauty, the profuse use of short Saxon words.

Of Mr. Kinglake's "Inkerman" volume we shall undertake to present no detailed account. Those who wish to read of heroic actions, and to gain an understanding of the singular phenomena which sometimes present themselves in the confusion of actual combat, will find in it ample store ; the details of individual prowess are of more interest to English than American readers, and we shall attempt no quotation. Artistically, this fifth volume is the best of the series, as it exhibits fewer of Mr. Kinglake's faults and more of his excellences. The "arch-conspirator of the Elysée" is no longer the *deus ex machina* of the story ; "St. Arnaud, formerly Le Roy," is removed from the scene. While he does not assign to the French army the prominent position they have always held in the popular conception of Inkerman, he is not so chary of praise as he was in former volumes.

The very nature of the conflict itself is exactly fitted for Mr. Kinglake's pen. Inkerman has been justly called "the soldier's battle." It was fought out tactically and physically by line officers and rank and file. Although prolific as a record of heroic deeds, it is barren as a model for the military student. Our author's attempt to exhibit Lord Raglan as a great general is a more decided failure than ever, in face of the gross negligence which, despite the repeated warnings of De Lacy Evans, left the British right exposed on a barren hill-side, — a two-gun battery *without the guns* for its only coign of vantage. Nor, when the battle was joined, was there any brilliant tactical display, only such blunders as led the gallant Cathcart down the ravine, where, retreat cut off, he perished with half his men. On the Russian side there seems to have been a tolerably well-arranged plan, but it melted into thin air, when Soimonoff mistook "east" for "west," while Gortchakoff's feint, imperfectly planned and badly executed, failed of its effect.

Thus the battle became an old-time contest. To force the way through brushwood, to clamber up the steep sides of the ravine, to

eling with dogged obstinacy to every stone, to every inequality of the ground, which could afford protection ; to load and fire ceaselessly, and, ammunition failing, to engage in the actual physical struggle with the bayonet, so rare in modern warfare,—nay, in some instances to strike with the fist, to tear each other with the hands, and seizing stones from the hillside to hurl them at the foe,—such was the battle of Inkerman. No two accounts of it agree ; no one ventured to pronounce authoritatively on what he saw, and in the mist and confusion hardly any one was certain of what he did see. Generals who had issued orders were dead before the battle was over, and no one could tell exactly how each little band assisted the others.

This is the subject for Mr. Kinglake. The untiring industry which collects and carefully examines every source of narrative from the pompous bulletin of the major-general to the homely story of the soldier's letter ; the faculty of comparison and critical examination, which from a mass of rough material evolves a clear, consistent narrative ; the intense sympathy with his subject ; the eager desire to place his reader in possession of all the facts which leaves no heroic act unnoticed ; and the brilliant style, which hurries us on without fatigue,—all these are found in his description of the battle of Inkerman.

As his narrative is to be continued until the death of Lord Raglan, there is at least another volume yet to come ; its coming we trust will be not long delayed ; the subjects with which it deals call for the exercise of faculties of whose possession by Mr. Kinglake we have had a foretaste. He wields the weapons of ridicule and sarcasm with a master's hand, and he has a fine field for their display in his account of that marvellous red-tapism which denied wounded marines admission into the naval hospital because they were soldiers, and into the army hospital because they served on shipboard. The most perfect type of administrative incapacity, however (a type of which we have had some experience on this side of the Atlantic), was the ill-fated "Prince." This splendid vessel was loaded by half a dozen clashing departments with a cargo valued at half a million sterling. When she touched at Scutari, they found—in the words of the bitter satire published in "Punch"—

"The medicine stores ground to paste,
Under the cylinders, heavy and vast,
That should have come first, but somehow came last,
On board of the steamer
That none stowed."

When she reached Balaklava, there was no one to break out her

cargo, and after lying in port a few days, she was found in the way and ordered out of the harbor. In the November hurricane, while the English commander-in-chief was sitting quietly at his desk "writing down the bashi-bazouks," she went to the bottom, with all the army's winter clothing on board. Never was there a fitter theme for Mr. Kinglake's caustic pen.

Finally the long-deferred Preface, written in the light of recent events, is sure to be interesting reading.

When the work is completed its many and great beauties will always insure it a host of readers, while the author's prejudices will never prevent its being regarded as the great storehouse of facts in the Crimean War, and the best account of that episode in European history which we are ever likely to see.

E. H. L.

2.—*Queen Mary.* A Drama. By ALFRED TENNYSON. [Author's Edition from advance Sheets.] Boston: James R. Osgood & Co. 1875.

THE appearance of this drama is the most interesting event that has occurred for years in English literature, and the interest is peculiar in being quite independent of the success or failure of the poem. Mr. Tennyson's early poetry was graceful, sometimes thoughtful, sometimes, though not often, vigorous, but always reflected a mind which the public soon believed itself to understand and to feel no great difficulty in measuring. The poet did not at first roughly grapple with conceptions of human character; did not tear himself from the study and expression of those ideas which came easiest to him in order to put life into new creations. The *Ulysses* of Mr. Tennyson was but Mr. Tennyson himself under a mild restlessness, and not essentially different from Mr. Tennyson drinking his pint of port at the Cock. Most critics might well doubt and did doubt whether a mind self-limited in this manner could go far beyond its beaten path. They recalled Shelley and Byron, both naturally more vigorous than Tennyson, yet both apparently unable to conceive characters that were not either a counterpart of themselves or no characters at all. There was little reason to suppose that the author of the "*Skipping Rope*" and much more such stuff could ever rise so high as to conceive a thoroughly human being. Yet as time went on it became evident that Mr. Tennyson himself was visibly tending towards and aiming at precisely that highest point of artistic ambition, the expansion of his own mind until it should embrace all mankind.

Year after year saw him making one effort after another in the same direction, but always with a certain gain in the force of his grasp. The Idylls were in this respect an advance beyond "Maud," as "Maud" was an advance upon "The Princess." The "Northern Farmer," really a strong delineation, is like rough-hewn granite beside the flabbiness of the "May Queen." There were few attentive readers whose curiosity was not excited to learn how far it was possible for a poet to develop himself in this manner, and there were not many who had confidence enough in Mr. Tennyson's genius to believe that any other result than more or less complete failure was within the range of possibility. Nevertheless, even the attempt was deeply interesting.

And now Mr. Tennyson has not only made the attempt, but has made it with an emphasis which cannot be mistaken. He has not only discarded at one stroke all his old peculiarities, all those beauties of form which made him famous, all those delicacies of expression which formed a distinct mark in our literature, all those vague questionings of social and superhuman problems which gave whatever appearance of original thought there was in his early works ; he has not only thus cut loose from his own past and struck out into absolutely new seas, but he has chosen a new method not less calculated to excite curiosity and enthusiasm. He has aimed at nothing less than the highest mark. This drama of "Queen Mary" from beginning to end, in its subject, in its treatment, its language, its form, offers only one reasonable explanation. Its subject is a close and direct continuation of Shakespeare's historical plays, its treatment closely adheres to Shakespeare's mode of treatment, its language and its form are often startlingly suggestive of Shakespeare. The play itself has been hailed from the first by Mr. Tennyson's warmer admirers as the greatest drama since Shakespeare's time. It is impossible to doubt that Mr. Tennyson has intentionally and emphatically asserted his claim to the highest rank among poets. He has challenged a seat by the side of Shakespeare.

That this should be Mr. Tennyson's meaning is not very surprising, nor, if the conditions of success are closely examined, does there seem to be anything very extravagant in the attempt, at least provided that the idea of rivalry to Shakespeare be not too strongly suggested. In point of fact, what historical English drama has been written since Shakespeare's time ? Why may not Mr. Tennyson reasonably aspire to excel "Cato," "Venice Preserved," or "Beatrice Cenci" and "Marino Faliero," or "Strafford"? And must not success in such an undertaking result *pro tanto* in placing the successful

poet next to Shakespeare? If there be anything unreasonable in the attempt, it is because as a matter of fact the idea of actual rivalry to Shakespeare has been somewhat too obviously suggested. Queen Mary is too near Henry the Eighth. Cranmer and Gardiner are too directly the successors of Wolsey and Cromwell. Mary is but the daughter of Queen Katherine, and Elizabeth of Anne Bullen. The clowns and crones of Tennyson tread on the heels of those whose immortality has hitherto been the triumph of the Elizabethan age.

Yet to institute a comparison, as thus suggested, between Queen Mary and Henry the Eighth is out of the question. Queen Mary will not for a moment bear such a test. Nor is it proper in this instance to compare Mr. Tennyson with himself. He has abandoned his old paths and sought new ones. It would be unfair to him to test the new poetry by the tests which were once used for the old. There is no way in such a case but to throw aside comparisons, and to judge of Mr. Tennyson's success by abstract rules. There are two points to be settled: first, the question what Mr. Tennyson has created; and, second, by what means he has effected his result; or, in other words, what thought is embodied in the drama, and how is that thought expressed?

And to begin with, Mr. Tennyson must be acquitted of the suspicion of having written a political pamphlet. He is too thorough an artist not to have chosen his subject and his treatment of it with a full consciousness of its poetical capacities. If Queen Mary is, as has been said, not a subject for high tragical interest, it was for Mr. Tennyson to overcome that difficulty or abandon the subject. It must be acknowledged that the difficulty is not overcome. The drama embodies no profoundly tragical human interest or passion. The Queen Mary of this play is the Queen Mary of history, essentially prosaic even in her most exalted or depressed moments. Mr. Tennyson has added nothing to the thought, such as it was, that history furnished to him. He has not elevated it, he has not intensified it, he has not even suppressed the pettinesses of it. The power of the play, therefore, is not in its central motive, which Mr. Tennyson has simply adopted from history.

The list of Mr. Tennyson's dramatic characters numbers more than forty; and if to each of these the same test be applied, very much the same result will be reached. Philip hardly reaches the dignity of a conception at all. Elizabeth is better, but still more like a carefully studied imitation than a true creature of poetic genius. Cardinal Pole is much better. Here Mr. Tennyson evidently felt his character. Cranmer is the mere historical wax figure, one of the

most disappointing of all ; he embodies no thought of Mr. Tennyson's and suggests no moral meaning. Gardiner is better again, and has real life. But with all these and indeed with all the characters of the drama, except Joan and Tib and Old Nokes, the admiration felt by the reader is rather for Mr. Tennyson's capacity as an historian than as a poet. His figures, the incarnation of his thoughts, are not poetical creations. From beginning to end they are, as conceptions, prosaic. It is impossible to doubt that whatever Mr. Tennyson's power over language may be, his power over thought is not of the first nor even of the second order. Many English dramatists are here his masters.

So far there seems to be a tolerable agreement among Mr. Tennyson's critics, who may indeed differ as to the exact relative rank of their author among creative poets, but who are commonly agreed that this rank is not the highest. The difficulties increase, however, when the question of form is reached. If Mr. Tennyson is not one of the first among inventive poets, he has been at least pre-eminent as a master of form and expression. And one cannot but admire his courage when one sees him challenging the highest rank among creative poets and voluntarily stripping himself, as he steps on the stage, of all those advantages which have hitherto been his chief instruments of success. Mr. Tennyson must indeed have both great courage and great confidence in himself, to choose such an ordeal. There can be few more interesting subjects of criticism than to determine how far that self-confidence has been justified by success.

Certainly in no mean degree. If depth of thought is wanting, there is yet much in the manner in which the drama is worked out, much in the detail, that must claim high praise. There is even an excess of delicate analysis and refined execution where there should be broad conceptions. Yet the poet has rigorously confined this delicacy of touch to his development of character ; the mere language is even at times unnecessarily rough. Perhaps the best part of the whole drama is the debate in the Council on burning heretics (Act III. Scene 4), where Cardinal Pole's character is finely delineated, and which is admirably supplemented by Scene 2, Act V., where Pole and Mary unite for the last time in expression of their common feeling, now of despair as at first of triumph. If Mary's historical character had been as sympathetic to Mr. Tennyson as Pole's, this drama would have been a very fine, perhaps even a very great work. But Mary's character has evidently wanted the poet's thorough interest. He never wholly becomes identified with her. Even in Mary's last scene, where her mind wanders, broken by the

weight of its disappointments, and she sees the figures of Latimer and Cranmer in her wanderings, the vision inspires no terror, not even a shudder, in the by-stander : —

“ O God ! I have been too slack, too slack ;
 There are Hot Gospellers even among our guards, —
 Nobles we dared not touch. . . . But by God’s grace
 We ’ll follow Philip’s leading, and set up
 The Holy Office here — garner the wheat
 And burn the tares with unquenchable fire !
 Burn !
*Fie, what a savor ! tell the cooks to close
 The doors of all the offices below.*
 Latimer !
 Sir, we are private with our women here —
 Ever a rough, blunt, and uncourteous fellow —
 Thou light a torch that never will go out !
 ’T is out, — mine flames. . . . Ah, weak and meek old man
 Seven-fold dishonored even in the sight
 Of thine own sectaries. No, no. No pardon ! —
 Why, that was false : there is the right hand still
 Beckons me hence.
 Sir, you were burnt for heresy, not for treason,
 Remember that ! ’t was I and Bonner did it,
 And Pole ; we are three to one. Have you found mercy there,
 Grant it me here : and see he smiles and goes,
 Gentle as in life.

Alice. Madam, who goes ? King Philip ? ”

Does it need turn to Shakespeare to see why this is not what it might be ? The wonder is how the poet, in face of “ Macbeth ” and “ Hamlet,” should have dared such a flight. Through it all, the woman is commonplace and really sees and feels no more in her hallucination than in her most practical daily life. And what is worse, her attendants see no more in it than herself. But at least Mary is respectfully dealt with, whereas her husband Philip is absolutely maltreated by the poet, who is not content with making him unamiable, but actually makes him vulgar, and in doing so, necessarily to the same extent makes the drama vulgar. What can be said of verses like these ? —

. . . . “ I am sicker staying here
 Than any sea could make me passing hence,
Tho’ I be ever deadly sick at sea.
 So sick am I with biding for this child.
 Is it the fashion in this clime for women
 To go twelve months in bearing of a child ? ”

If it be said that Philip was really vulgar as well as morose, and mean in intellect as narrow in sympathy, not only can this be no good reason for degrading the poetry, but in reality the drama is hardly consistent with itself. Nothing could be more kingly than his answer to Mary's innuendo : —

" Philip. . . . Many voices call me hence.

*Mary. Voices, — I hear unhappy rumors, — nay,
I say not I believe. What voices call you
Dearer than mine that should be dearest to you ?
Alas, my Lord ! What voices and how many ?*

*Philip. The voices of Castile and Aragon,
Granada, Naples, Sicily, and Milan,
The voices of Franche Comté, and the Netherlands,
The voices of Peru and Mexico,
Tunis and Oran, and the Philippines,
And all the fair spice-islands of the East."*

Another difficulty rises from the fact that many important characters disappear before they are half delineated. Courtenay and Wyatt, even Gardiner himself, and Bonner, vanish just as the reader is learning to understand and take interest in them. The material for many tragedies is crowded into one, and the controlling interest is not strong enough to reduce all the details to a proper subordination.

Of refinements of language such as the reader of Mr. Tennyson's poetry habitually expects, of harmonies of expression, there are, as has been already said, comparatively few. The whole first act contains hardly more than one. When Mary is told that Philip is earnest to set foot in England, she bursts out : —

*" God change the pebble which his kingly foot
First presses into some more costly stone
Than ever blinded eye. I'll have one mark it
And bring it me. I'll have it burnish'd firelike ;
I'll set it round with gold, with pearl, with diamond.
Let the great angel of the church come with him ;
Stand on the deck and spread his wings for sail."*

This is fine, more especially the two concluding lines, which are in deep harmony with Mary's fanatical union of human and heavenly devotion. But, at the risk of hypercriticism, one might perhaps suggest a doubt whether the use here indicated for wings is altogether poetical. Birds use their wings to soar upon, to beat the air with, and so, it is presumed, do angels. A bird, even the most stately, if it stood on a log and spread its wings for a sail, would be an amusing but hardly a poetic object. Why should an angel be

permitted to use his wings in a manner that would be ludicrous in an eagle? Besides, to sailors, such a simile must inevitably raise associations with another kind of wing-and-wing navigation,—associations that are fatal to gravity.

Cardinal Pole's figure is perhaps on the whole more pleasing:—

. . . . “Who lights the fagot?

Not the full faith, no, but the lurking doubt.

Old Rome, that first made martyrs in the Church,
Trembled for her own gods, for these were trembling,—
But when did our Rome tremble?

Paget. Did she not

In Henry's time and Edward's?

Pole. What, my Lord!

The Church on Peter's Rock! never! I have seen
A pine in Italy that cast its shadow
Athwart a cataract; firm stood the pine,—
The cataract shook the shadow. To my mind
The cataract typed the headlong plunge and fall
Of heresy to the pit: the pine was Rome.
You see, my Lords,

It was the shadow of the Church that trembled.”

Many real admirers of Mr. Tennyson who are yet not quite convinced of his tragic power will frankly own that they find their old friend at his best in the pretty song of the milkmaid, which contrasts so gracefully with the cares and anxieties of Elizabeth:—

“Shame upon you, Robin,

Shame upon you now!

Kiss me would you? with my hands

Milking the cow?

Daisies grow again,

Kingcups blow again,

And you came and kissed me, milking the cow.

“Robin came behind me,

Kiss'd me well I vow,

Cuff him could I? with my hands

Milking the cow?

Swallows fly again,

Cuckoos cry again,

And you came and kissed me, milking the cow.

“Come, Robin, Robin,

Come and kiss me now;

Help it can I? with my hands

Milking the cow?

Ringdoves coo again,

All things woo again.

Come behind and kiss me, milking the cow!”

Finally, if it is necessary to sum up the result of the impressions produced by Mr. Tennyson's drama, it must be conceded that "Queen Mary" contains nothing which will change the opinion of those who had already made up their minds that Mr. Tennyson was a master of form, but not of thought, that he could express, but not invent. On the other hand, it cannot be denied that as a study of life, "Queen Mary" is not only an advance, but a considerable advance, upon anything the poet has yet done. He is not losing, but gaining, ground. He has descended into the arena and fought for the prize without the assistance of his own natural weapons, and he has at once, if not achieved a great victory, at least escaped defeat. In spite of its defects, "Queen Mary" is a higher type of work than anything Mr. Tennyson had done before. No doubt there are natural limits to the poet's power of self-development, but he seems not yet to have reached them. If he writes a drama of Queen Elizabeth, it will probably be better than "Queen Mary"; and, questionable as the success of "Queen Mary" is, there is still enough in it that is excellent to make the world ask for more.

3.—*An Introduction to the History of the Law of Real Property.* By
KENELM EDWARD DIGBY. Macmillan & Co. Oxford. 1875.

THIS is a very admirable little book. The utter lack of all educational law-books induced Mr. Digby to write this Introduction, arranged for the use of students, many of whom may not become lawyers, and possessing, therefore, a double interest, educational and historic. It not only presents the author's views on certain obscure portions of the law, but develops his method of instruction.

As is truly said in the Preface, the difficulty in instructing university students in law is to draw the line between principle and detail. Of late years an effort has been made in English universities and American law-schools to teach law historically and scientifically as well as practically. Too much cannot be said in support of the theory which produces such efforts. Efforts such as these alone distinguish the school from the office, and give to its instruction an independent and real value. To teach law as was and is unfortunately still done in many cases by the simple formula, "This is the law to-day, make the most of it," is sheer waste of time. This method is fast being abandoned, and the proper theory is now, in some cases, in danger of being wrecked by bad practice. The line between principle and detail is hard to draw, and we therefore cordially recommend Mr. Digby's

book to American law professors for suggestions of method. As the author says very modestly, he has only "sketched" the history of the law. This is precisely the right thing to do. Begin as he does at the beginning and sketch freely the main principles on which the fabric of modern law is built, then, having developed the causes up to a certain point, throw all the weight of instruction on the effects, the law of to-day. One danger to the new theory is that its adherents sometimes forget that the primary object of a law-school is to turn out practical lawyers. The historic part of the instruction, although the distinguishing mark of schools, is purely secondary, and must be carefully subordinated to the business of making lawyers. It is an all-important and essential adjunct, but is in its nature subsidiary. Another danger is the useless elaboration of details,—the giving twelve examples of a principle where one would do, simply because they are ancient. This is mere antiquarianism of the worst kind, and absolutely injurious. The greatest danger of all arises from a combination of this love of antiquarian detail with a partiality for some one period particularly rich in legal curiosities. Such a period generally must form one link in the chain of development, but the evil is in choosing it for instruction to the exclusion of all that goes before and comes after. It may be a period when the law has an interest only from its iniquitous technicality, when the old system is utterly corrupted and the reform not yet begun. Instruction in such a period obscures principles by procedure, disgusts the student, and causes in his mind the confusion of the good theory and the vicious method, and the consequent ruin of both; a great injury to the cause of sound education.

The most interesting portion of Mr. Digby's work as a contribution to the history of law, is the first chapter. Anglo-Saxon law has been almost entirely neglected in all elementary treatises, Glanvil being generally taken as the starting-point, vague references to everything anterior being considered sufficient. In reality Glanvil represents an advanced period of legal development. It is also not unusual in text-books to represent feudalism as the only source of English law until the advent of Bracton and Roman influence. Many authors leave the idea on the student's mind that feudalism sprang armed from the heads of the Normans, and was by them brought to England. The germs of this system, which was the growth of centuries, had been brought in by the Teutonic invasion. When the seed fell on good ground, as in France, it ripened very fast; when on stony ground, as in England, the growth was slower, but the same result was at hand. William the Conqueror superimposed a fully developed system on a half-developed one of the same stock. It is this development before

the Conquest with which the first chapter deals. To fix exactly the first dawn of a conception of individual property in land is of course impossible. In dealing with this the first point in his history, the natural, and we think correct, inference of Mr. Digby is that the idea of individual property in land began with the curtilage.

The value of a simple and comprehensible classification of the different kinds of land at this period is obvious. This Mr. Digby has attempted to give; and although he has not succeeded perfectly, he has taken a long step in the right direction. It would have been better if, instead of simply separating the different sorts of land, the manner of their growth, and their relation to the parent stock, had been shown. When the Saxons settled in England, they brought with them certain legal conceptions as to land. The primary idea was that all land had been originally folcland, that is, the land of the community over which the king exercised rights of grant by and with consent of the people directly or through their representatives. At the period of the Saxon conquests certain other ideas had become fully developed. These were the property of individuals in the curtilage, the allod, or hereditary estate, an expansion of the yearly allotment, and the corporate property of towns, villages, hundreds, etc., in cultivated land subject to the allotment system, and certain defined tracts of wild land for the exercise of pasture and wood rights. All these legal conceptions were transplanted intact, and with them, of course, a large mass of folcland still existed. The king, in his capacity of distributor, soon created a new class, which gave rise to many new forms and new conceptions, but which all fall under one head of Boeland. Gradually, as in Germany, the theory was developed that all land not already subject to ownership, all the folcland or land susceptible of royal grants, was the property of the king. The consent of the people to these grants, recognized by the joinder of the Witan in all the charters, was gradually lost sight of, and the ancient folcland became the *terra regis* of Domesday.

In the limits of a notice it is only possible to indicate as above a method of classification which appears to offer a reasonable probability of success. Folcland, the usual stumbling-block, has proved one to Mr. Digby. The attempt to make a distinct class of wild or waste land is, we venture to think, a mistake, for wild land, unless mark land, to adopt the German phrase, was only folcland; and the mere fact that it was wild made it none the less so.

Full justice is, in almost all cases, done to the legal conceptions which were common in the period before the Conquest. The reader is not here forced to suppose that all legal ideas, simple and complex,

were either Norman or Roman. In dealing with tenures and their origin, Mr. Digby gives a satisfactory description of the fundamental relation of princeps and comes. Oddly enough, in dealing with this portion of his subject, he is still a little hampered by the emphyteusis. He seems unable entirely to make up his mind that it was merely a circumstance favorable to the development of the commoner form of feudal tenure. The old idea that military tenure, and not the Teutonic relation of lord and man, is at the bottom of feudalism is here slightly apparent. The section on the manor courts is unnecessarily confusing, because the leading idea of the replacement of the old legal unit, the hundred court, by the manor courts, is not made sufficiently prominent.

The best part of the book is that treating of legal development under Henry II. From this point Mr. Digby is on well-trodden ground, but his work is none the less useful. The excerpts are singularly good. The selections are all important passages, neither too many nor too few, and the running commentary enhances their value. Mr. Digby has been singularly happy in his pruning. All the dead branches are lopped off, to the immense improvement of the main stems. The student's mind is thus relieved from the cumbrous and confused learning of early law in real property.

Two points are suggested by the latter portion of the book, in treating which Mr. Digby has partially failed. No account is given of warranty, the leading idea of early Teutonic law. The whole system in regard to personal property may be found in the early laws, and the exact resemblance between the warranty of personal property and the later warranty of real property shows their close relationship. If, instead of confining himself to the regular English favorites, Von Maurer and Nasse, Mr. Digby had made a little excursion into Sohm's "Lex Salica" and the "Leges Barbarorum," a good chapter on warranty might have been the result. The other point neglected by Mr. Digby is dower. The account of this important branch of the law is begun with the dower *ad ostium ecclesiae*, a comparatively late period. No single branch of law is more elaborated or exhibits higher legal conceptions at early periods than dower. This rich field is left utterly untouched, and the only conclusion offered by Mr. Digby is that dower suddenly appeared in the time of Henry II. This is, however, a charge which cannot be brought against the author in any other instance. The existence of many fundamental ideas among the Saxon is, as we have said, fully recognized. The effort is always to trace them down conscientiously from the early native sources. The chapter on wills well illustrates this. The ordinary text-book would apparently have

one believe that, somewhere in the reign of Henry VII., the brilliant conception of arranging for the disposition of property after death occurred to some one, and the plan was so well received that in Henry VIII.'s reign legislation on the subject became necessary. There is none of this stupidity here. Without enlarging on the trite proposition, that every man likes to dispose of his property as he pleases, the common use of wills among the Saxons, their temporary abolition and subsequent revival, are briefly and clearly sketched.

In all the chapters relating to feudalism and its customs, the work is exceptionally good. All the complicated tenures, customs, etc., are concisely and thoroughly defined, with illustrative excerpts, which make the book very valuable for reference and an indispensable aid to the professor of mediæval history who is striving vainly to give his students an idea of feudalism from Hallam or some like book.

Increasing in fulness of detail, the treatment of modern law leaves nothing to be desired, and exhibits the advantages of the author's method. As a whole, the book, although the author, with great modesty, makes no claim, as he might justly have done, to originality, is most useful and valuable. Real property offers the most favorable opportunity for historical work of this sort, but the example might be advantageously imitated in other branches.

H. C. L.

4. — *Römisches Staatsrecht*, von THEODOR MOMMSEN. Zweiter Band. Erste Abtheilung. Leipzig. Verlag von S. Hirzel. 1874. 8vo. pp. 697.

THE present instalment of Marquardt and Mommsen's *Handbuch der Römischen Alterthümer*, treats of the magistrates of the Republic; the Emperor and his officials appear to be reserved for the second "Abtheilung." When reviewing the first volume (North American Review, April, 1873), we ventured to express the opinion that the succeeding volume would not contain so much that was new, whether in facts or in theories. In this we were mistaken. The discussion of the individual magistrates here given is hardly inferior in originality and interest to the general discussion of the nature of the magistracy contained in the first volume.

The view taken of the Consulate, that it embodied the full royal power, only limited by the three features, — the yearly term of office, the equal powers of the two colleagues, and the right of *Provocatio*, — is familiar to all readers of Mommsen. In the present volume he insists more strongly than ever upon the doctrine that the consul is

the direct successor of the king ; and enters upon a profound and instructive inquiry as to the relation of the other magistracies of the early Republic to this original and typical one. We will attempt to describe the system sketched out in pursuance of this analysis. The magistrates in question are the Dictator, with his Master of Horse, the Military Tribune, with consular power, and the Praetor.

First, of the Dictator, whose office is usually regarded as identical with that of the king, temporarily revived in times of great public peril. In Mommsen's view it is, on the other hand, to be regarded as not derived from the kingly office, but as developed out of the office of consul. The collegiate principle being suspended in regard to the Dictator, his power approximated that of the king, so that "in this sense we may accept the expression that the introduction of the Dictatorship was the revival of the monarchy" (p. 151). Nevertheless, it was not an extraordinary magistracy, except in the sense that it was introduced only on extraordinary occasions and for special ends (primarily military). It was a regular part of the constitution : "the Dictatorship was the regulation that, at the abolition of the monarchy for life, the power was given to the new annual rulers to install a third colleague at their discretion, with respect to whom the people did not require to be consulted beforehand, but who was superior in power to both of them" (p. 138).

The Dictator was, therefore, the colleague of the consuls, with superior power (*maius imperium*), and the Master of Horse was again his colleague with inferior power ; just as in the first volume the Praetors were shown to be inferior colleagues of the consuls. "In this sense the offices of Dictator and Master of Horse may be conceived as a substitution for the consulship in such form that collegiate inequality took the place of collegiate equality" (p. 163).

The theory in regard to the military tribunes with consular power, who, for several years, were elected instead of consuls, is equally novel. It is shown in the first place that tribunes of the soldiers, six in number, were an institution of the very earliest times, as the regular commanders of the legion,— the legion being, at this period, the entire army. When, in place of the one phalangal legion, there were organized two or more manipular legions,— a reform which probably took place about b. c. 400,— each of these new military divisions received its six tribunes ; so that the number of tribunes varied from year to year with the number of legions. Now, "the *tribuni militum consulari imperio* are not extraordinary magistrates in any sense, but the regular and well-known officers, although, to be sure, named in an extraordinary mode [by election instead of appointed], and invested

with extraordinary powers, as is clearly expressed in their twofold title ; as *tribuni militum* they are the usual officers of the legion ; but they are at the same time possessors of the highest magisterial power " (p. 169).

By an ingenious comparison of figures it is shown — or made probable — that six was the regular number of these magistrates, being the regular number of the tribunes of the legion ; wherever a smaller number is given in the Fasti, the explanation is, that only those ranked as magistrates who had received a majority in the *comitia*, but that those elected magistrates filled up the number of six by appointment, — the regular mode for the military tribunes, — the appointed members not being regarded as magistrates, and exercising only military functions. The compromise, therefore, by which, in the half-century preceding the Licinian legislation, military tribunes were, as a rule, elected in place of consuls, consisted simply in this, that the regular yearly commanders of the legion were invested with the *imperium* and with all the essential consular powers. Inasmuch as the patricians and plebeians stood on a perfect footing of equality in the army, this compromise admitted the plebeians to a share in the actual exercise of government, while still excluding them from certain special privileges of patrician magistrates.

The reason for this distinction between the two classes of tribunes is explained to be the want of power, on the part of these magistrates, to fill their own vacancies. Six commanders of the legion there must be, and these were regularly appointed by the consuls ; so when tribunes were elected instead with consular power, they could fill up vacancies in their number with merely *military* officers ; but *magistrates* they had no authority to create. So with another power of the patrician magistrates, — that of appointing a *praefectus urbis*, in case of absence from the city, for the administration of city affairs. As such an appointment was beyond their powers, it was necessary that some one member of the board should be left behind in the city, to perform the civil functions of the consulship, while the others were absent in the field ; and from this there followed important results. The public became accustomed to seeing one of the six colleagues especially set apart for the administration of urban affairs, chiefly the *iuris dictio* ; when, therefore, the consulate was restored by the Licinian Laws, b. c. 367, after a practical suspension of fifty years, it was easy to adopt this feature. A third magistrate — a third member of the board, as it were — was established, for the *iuris dictio* ; the *Prætor Urbanus*, so called because his duties were confined to the city. " It amounted to the same thing, whether they elected three tribunes,

one of whom had to remain at Rome, or two consuls for affairs outside the city, and one colleague of inferior powers for city affairs" (p. 175).

The other magistrates do not require any detailed consideration on our part. The most important of them—the Proconsulate and the Tribune of the Plebs—are discussed, as to their most important features, in the first volume: the Quæstor's office offers nothing especially striking; and the long chapter (138 pages) upon the Censorship is remarkable rather for systematic erudition than for originality. The Censors, it is shown, were not colleagues of the consuls, as the Dictator and Praetors were; for the end, it would seem, that the consuls might not be able to intercede against their measures. The chapter upon the *Ædiles* is one of the most interesting. The view presented is that, when the plebeian organization was assumed and incorporated in the state, and their officers transformed to magistrates, the tribunes were simply accepted, with their abnormal powers, while two new *Ædiles* (consuls) were created by the side of the plebeian, not as colleagues, and with powers in some respects very different (p. 457). The judicial powers of the *Ædiles* are treated at some length.

The closing chapter, on "the extraordinary constitutive powers," — the Decemvirate *legibus scribendis*, the Dictatorship of Sulla and Cæsar respectively, and the Triumvirate *rei publicæ constituendæ* of Cæsar, Octavianus, Antony, and Lepidus, — is one of the most powerful and important in the book. One learns, in studying this chapter, to rate still more highly the framers of our Constitution, who hedged the power of amendment about with such precautions, that — excepting the Bill of Rights of the First Congress, and the provisions which grew out of reconstruction — it has been only twice put in operation: the facility of amending the Constitution may yet prove a vulnerable spot in the English institutions and in Professor Mommsen's own Empire, as it was in the Republic of ancient Rome. The perilous character of such exceptional authority was, he says, clearly recognized by the Romans, and it was for this reason distinctly declined by Augustus. "By the side of the admiration for Cæsar's magnificent reconstruction of the Commonwealth, the statesman will also come to be respected who declared such creation to be above human powers, and, destroying the instruments for it, attempted, with some degree of success, to perform what was essential with a substitute in itself very weak" (p. 697, *non regno, neque dictatura, sed principis nomine constitutam rem publicam*. Tac. Ann. I. 9).

5.—*Statistical Atlas of the United States, based on the Results of the Ninth Census, 1870, with Contributions from many eminent Men of Science, and several Departments of the Government.* Compiled under Authority of Congress, by FRANCIS A. WALKER, M. A., Superintendent of the Ninth Census, Professor of Political Economy and History, Sheffield Scientific School of Yale College. Julius Bien, Lithographer. 1874.

GENERAL WALKER is one of the few American soldiers who, leaving the army for the civil service at the close of the war, have not rested upon a creditable military record, or betaken themselves from the camp to the caucus, but have achieved fresh distinction, and established new claims to popular confidence and gratitude by the display in administrative affairs of scientific method, enthusiastic industry, and practical skill. As chief of the Bureau of Statistics, he exhibited the qualities which almost forced his appointment to superintend the Ninth Census; and in this position his executive ability led to his appointment as Commissioner of Indian Affairs,—an office which he resigned, after too brief an occupancy, to accept the professorship at New Haven which he now fills. The civil service can ill afford to lose officers who combine literary and scientific culture with practical experience; but, on the other hand, institutions of learning are doubly blest in obtaining instructors who possess the knowledge of men and affairs, as well as of books and theories.

There is no science which more imperatively requires to be studied and handled with common-sense than the new science of statistics, particularly in its applications to vital, social, and political problems. The chemist, astronomer, or pure mathematician may pursue his inquiries in cloistered seclusion, and remain a child, in his ignorance of the world around him, outside of his special department. But the statistician must be able to combine the strictness and conscientiousness of minute inquiry with the power of wise generalization, including in his calculations incalculable elements, divining the reasons of variable phenomena, and patiently following out to demonstration the clews of his own insight. Obviously the first necessity of this process is the collection of trustworthy data; then comes the critical recognition of their incompleteness; and finally, highest and most difficult of all, the scientific discussion of the facts known, with the scientific interpolation, in due provisional measure and weight, of the facts half known or unknown.

It is matter for ever-fresh regret that Congress fell into a politi-

cians' wrangle over the new law proposed for the taking of the Ninth Census, and, not being able to agree upon the needed reforms in the system, left it in a form which was universally known to be bad. But the good workman is known by his performance with imperfect tools; and the results of the Ninth Census were obtained, under all the defects and discouragements of the law, with surprising rapidity and accuracy. As far as they go, they are trustworthy: which is the first great point. Moreover, their shortcomings are clearly recognized and pointed out in the volumes themselves: which is the second great point. And their significance has been elucidated in so many fruitful and suggestive applications by Professor Walker and his co-laborers as to confer upon the work itself an unexampled practical and popular value.

In the publication of the quarto volumes of the Census, Professor Walker obtained authority to introduce twenty-four plates, all of which, we believe, were geographical in form; that is, they were maps of the United States, upon which certain physical, vital, and industrial relations were indicated by the use of different shades of color. The experiment of reducing in this way the tables of population, nationality, disease, industry, and wealth to graphic form was very successful; and Professor Walker was authorized in 1873 to prepare — what we cannot better describe than by using the words of the Secretary of the Interior, in recommending the measure — "A Statistical Atlas of the United States, based upon the results of the Ninth Census, to contain a large number of maps, with appropriate text and tables, . . . for distribution to public libraries, learned societies, colleges, and academies, with a view to promote that higher kind of political education which has hitherto been so greatly neglected in this country, but toward which the attention of the general public, as well as of instructors and students, is now being turned with the most lively interest."

The result of this measure is the work before us, a magnificent folio Atlas, containing sixty full-page plates, with a series of monographs from expert hands upon special topics. The typography of the text is very handsome; and the lithographic work reflects much credit upon Mr. Bien, who has in this publication equalled or surpassed all former achievements of American lithographic map-makers. The colors are well chosen, and the registering and printing in the copy before us are worthy of high praise.

We can scarcely do better than enumerate the contents of the work, by way of giving some notion of its scope and value. To follow out the innumerable suggestions of a single one of its charts

would lead us into themes too profound and too extensive for our present purpose.

The work is divided into three parts, devoted respectively to the Physical Features of the United States; Population, Social and Industrial Statistics; and Vital Statistics.

Under the first head the plates comprise maps illustrating the river systems, forest areas, rain-fall, frequency of storm-centres, mean and extreme temperatures, barometric conditions, altitudes, etc., of the United States. There is also a map of the coal-measures, by Professor Hitchcock, including all the areas east of the Missouri; but not covering the immense and but partially explored lignitic coal-fields of the Rocky Mountain system, or those still farther west, in the Pacific States and Territories. The geological map of the United States, by Professors Hitchcock and Blake, which also accompanies this part, does not throw light upon the coal-resources of the Far West, because the coal-fields of Colorado, New Mexico, Wyoming, Montana, Utah, Idaho, Oregon, and California, being Tertiary or Cretaceous in age, are colored like all the rest of the Tertiary or Cretaceous formations. The Carboniferous period is indeed largely represented in the Interior Basin, but mostly by deep-water formations. The only true Carboniferous coal reported from that region is mined on a small scale near Eureka, Nevada. But these resources are too little known or developed as yet to be tabulated or graphically represented; and we do not wonder that Professor Hitchcock has let them alone, just as Professor Blake has wisely forbore to attempt any representation in colors of the shifting and inchoate industry of gold and silver mining. Some years ago, an ambitious Commissioner of the General Land Office at Washington issued a map of the country on which the localities in the Far West, producing gold, silver, and other metals, were indicated by spots of appropriate color. But those who were acquainted with the region failed to discover why the Commissioner's spots should occupy the precise localities he had chosen for them. Spots were vanishing and new spots breaking out, every season; and the freckled map was merely laughed at. The time had not come for such a generalization. Perhaps it may be near at hand now; but the work involves a careful discussion of the observations of King, Wheeler, Hayden, and Raymond, to say nothing of earlier explorers, by some one who is familiar with the history and the latest phases of the mining industry of the West. In the present volume, we find a very general survey of the subject from the pen of Dr. R. W. Raymond, the United States Commissioner of Mining Statistics, the most important parts of which are the tables of estimated pro-

duction of gold and silver by years. Professor J. D. Whitney contributes an article on the Physical Features of the United States; Professor W. H. Brewer discusses the Woodlands and Forest Systems of the country; and Professors Hitchcock and Blake furnish appropriate text in elucidation of their geological maps. We seriously miss from this part a botanical chart of the United States, such, for instance, as Professor Porter of Lafayette College has published. It would be useful for comparison with the geological, hypsometrical, and climatic maps.

Part II. contains many of the plates with which the Census volumes have already made us acquainted, illustrating the political divisions; the various relations of population (density, birth, parentage, distribution, illiteracy, occupation); the church accommodations provided by different denominations; the characteristic crops of the country and their distribution; the relations of wealth, debt, and taxation per capita in different sections, etc. Here, as in all the plates of the *Atlas*, most ingenious use is made of forms and colors to represent generalized relations. The different shades of color represent on each map different degrees of the element or proportion under consideration. In the geometrical charts color has another function. For instance, in those of church accommodations and occupations, the color indicates the denomination or occupation; and the area of the diagram so colored, the proportion represented. The map illustrating the political history of our territory shows still another use of color, to indicate the successive acquisitions of territory by which the country became what it is as a whole, and the phases of political change through which each of the present political divisions (States and Territories) has passed. Thus we can trace at a glance the early struggle between England and France; the foothold of Spain in Florida and Mexico; the results of the Revolution; the settlement of the disputes between New York and Vermont, Massachusetts and Maine; the cession of Western colonial grants to the general government by many of the original States; the formation of Territories and States from these; the acquisition of "Louisiana," under which modest title we got what is now Louisiana, Arkansas, the Indian Territory, Kansas, Missouri, Nebraska, Iowa, Minnesota, Dakotah, Montana, Idaho, Washington, and Oregon, with more than half of Wyoming and nearly half of Colorado; the acquisition of Florida from Spain; the annexation of Texas, then including part of New Mexico and Colorado; the conquest of California, including Utah and Nevada, with parts of Wyoming, Colorado, New Mexico, and Arizona; the purchase under the Gadsden treaty of the remainder of the two

latter Territories ; and, finally, the purchase of Alaska. An enlarged copy of this map, similarly colored, ought to hang on the wall of every American school-room. Nothing can more clearly and impressively epitomize the history of the United States. Mr. S. W. Stocking, the maker of the map, accompanies it with a full text of explanation ; but its great features, which are also its best, require nothing further. Mr. S. A. Galpin, in an article on the Minor Political Subdivisions of the United States, describes the political system based on the township as a unit, and characteristic of New England ; the county system, characteristic of the South ; and the combination of the two, or "compromise system," as he calls it, which is followed in the Northwest and larger Middle States. The article is not cumbered with argument or reflection ; it gives clear distinctions and descriptions, and then stops.

The article on the Progress of the Nation gives a tolerably good example, and the article in Part III. on the Relations of Race and Nationality to Mortality in the United States gives a very good one, of the method in which Professor Walker deals with statistical material. He is at home among the figures he has marshalled together. They march at his command. But he does not parade them in mere display or exhaust them in sham manœuvres. The article last named is specially valuable as furnishing a hint to the student of the way in which profitable use may be made of the rich material here accumulated.

Mr. E. B. Elliott, of the Bureau of Statistics, contributes some estimates of the probable population of the country in 1880, and of the population in every year since 1780, arrived at by a system of interpolation by "second differences." Mr. Elliott's estimate for 1880 is a little over 54,000,000. He also appears in Part III. as the constructor, on the basis of the very deficient vital statistics of the Census, of an approximate life table for the United States. The plates in this part comprise graphic illustrations of the local predominance of sex, of birth and death rates, and their relations to age, sex, and nationality, and to four principal classes of disease ; and of the afflicted classes, namely, the blind, deaf-mute, insane, and idiotic. In the treatment of these subjects, Mr. F. H. Wines, who constructed the diagrams, has devised a new and ingenious method of using ordinates, so as to indicate three relations at once. For instance, to represent the distribution of the blind between the two sexes and among the several periods of life, a vertical line is divided into ten equal parts, each standing for a ten-year period. At the points of division ordinates are drawn to right and left, perpendicular to the vertical.

Those to the right indicate females; those to the left, males. The length of each ordinate is proportioned to the number of blind of that sex at that age. The ends of the ordinates on each side are connected with a curve which forms the boundary of the figure; and finally, the sex which predominates on the whole is indicated by the shading of that side. The numerous little figures of this character, each occupying less than a square inch, which occupy several of the charts of vital statistics, bear witness to the compendious nature of this device.

In concluding this hasty survey of Professor Walker's admirable work, we desire to say of many of these charts what we have said already of one. They ought to be copied and enlarged and used for purposes of instruction in schools. There is much in them that cannot fail to impress even children with correct general ideas concerning the physical resources and distributed population and industries of the country; while any one of them would furnish a text for the profoundest comment on the part of the accomplished teacher or professor, in the presence of a class of advanced students. We trust some enterprising publisher will consider the feasibility of such an undertaking. A series of selected charts of this kind, especially if accompanied with a manual of explanations and additional information, references to authorities, etc., for the use of the teacher, ought to be both successful and beneficial. Indeed, the principal use of such a work should be rather the stimulation of thought and the facilitation of inquiry on the part of beginners. The true statistician maps and pictures his subjects in his head. For him rows of figures have color and voice and form. Yet even the most practised veteran in this "scientific use of the imagination" may find strange and unexpected suggestions and discoveries to spring from the contemplation of a few ingenious diagrams, in which, by a skilful use of simple symbolism, the various elements of numerous social problems are exhibited in juxtaposition or in superposition, so that their relations may be clearly seen. Indeed, without such assistance many interesting questions would scarcely be solved, and many others would never have been raised at all.

6.—*The Native Races of the Pacific States of North America.* By
HUBERT HOWE BANCROFT. Vols. II., III., IV. San Francisco.
1875.

THE initial volume of the series, which promises so much for the study of American history and antiquities, has been so recently no-

ticed in this Review, that we need hardly repeat what has been already said of Mr. Bancroft's general plan, and of the unrivalled thoroughness of his preparation. The admirable features which marked the beginning of his work are not less conspicuous as it advances, and the hearty commendation elicited by the first instalment runs no risk of being qualified by the portions now before us. Entering upon a wider field, and grasping more difficult inquiries, these volumes show an unwearied research, and a rare skill in the manipulation of material. The survey is equally comprehensive and exact; a perspicuous method pervading throughout the exhaustive array of facts. It rarely happens that such evident enthusiasm is found combined with such a candid spirit of inquiry. While an undertaking so extensive implies of necessity the co-operation of many hands, the work shows a singular evenness of execution, and is shaped by one informing mind. Although the responsible author of the work modestly disavows any claim to be ranked among philosophical inquirers, and repeatedly insists that he shall be regarded simply as a collector of raw material for more skilful hands to weave and color, yet it would be doing a gross injustice to confound his labors with those of a mere compiler. His authorities are weighed with scrupulous exactness, and the slightest discrepancy of statement is never overlooked. The acute and sometimes caustic criticism which the notes supply show that the sixteen thousand books and manuscripts which make up his rare collection have not been swallowed without digestion. How far the praise for this judicious sifting and comparison should be distributed among the accomplished corps of assistants to whom Mr. Bancroft intrusted the details of his laborious undertaking we have no means of judging, but to whomsoever due, it should be ungrudgingly bestowed. We have seldom seen evidence of such faithful work.

Having completed in the first volume the delineation of the wild tribes, Mr. Bancroft devotes his second, a goodly octavo of eight hundred pages, to the civilized nations. Beginning with a preliminary chapter in which he defines the terms "savage" and "civilized" as simply marking shifting stages in human progress, so that it is no easy matter, at any given point, to draw the line between them, he analyzes the causes of progressive phenomena and the conditions essential to intellectual development. Not the least characteristic paragraph of this introduction is the neat passage with Mr. Buckle, in which one of the sweeping statements of that precipitate writer is most effectually crushed. We cannot, however, regard the dissertations which are prefixed to the second and third volumes

as any substantial addition to Mr. Bancroft's work, nor is the connection obvious between his theoretical conclusions and the investigations which follow. Reserving the vexed problem of the origin of American civilization for a later discussion, he proceeds to a general view of the number, extent, location, and mutual relations of the nations occupying the central portions of the continent at the time of its discovery.¹¹ The region which was the home of American civilization, within an historical period, extends from northwest to southeast between the latitudes of 22° and 11°. This native civilization, notwithstanding many common points of resemblance, the author separates into two great divisions, the Maya and the Nahua, the former the more ancient, but the latter by far the more powerful and widespread. Yet this classification is urged only in a general sense, since there are several nations which must be ranked as civilized which show no affinity with either of these two great families. Neither must too much stress be laid on the designations which the author uses, the term "Maya" being selected simply as the name of the most ancient Central American people, and "Nahua" as an older designation than either Toltec or Aztec, though the latter may be regarded as the representative nation of the Nahua race. After this general survey the author proceeds to consider the civilized nations under the five general heads of government, social system, military organization, commercial relations, and judicial institutions.

Next entering upon an elaborate examination of the Nahua nations, Mr. Bancroft devotes no less than seventeen chapters to an exhaustive analysis of all that has been transmitted to us respecting the public and private life of this extraordinary people. Following the general arrangement which we have just given, he furnishes a complete picture of the state ceremonials, the sumptuous regal appointments, the relations of classes, the tenure of land, the system of taxation, the domestic relations, the curious usages connected with the birth and education of children, the nuptial ceremonies, the endless feasts and amusements, the ways of singing and dancing, the religious rites, the horrid human sacrifices, the methods of raising and preparing food, the singular fashions of dress, the trade and currency, the organization of armies and weapons of war, the modes of administering justice, the crimes and punishments, the arts and manufactures, the astronomical calendar, the literature, the architecture, the funeral rites, in short of everything essential to a thorough comprehension of Nahua civilization. Every statement is fortified by citation of authorities, the attention of the reader being carefully directed to any conflict between them. To give a single instance of the fulness of these refer-

ences, we have, on the mooted question of the mode of succession to the Aztec throne, a note of more than a page of closely printed matter to establish the cautious conclusion of the text. Mr. Bancroft's habitual disposition leads him to suggest serious doubts respecting the marvellous stories of Aztec magnificence, but he gives them as they come to us in the old chroniclers, laying all the evidence before the reader. Certainly if a cloud of witnesses can establish any historical statement, we have no good ground for hesitation. For a single remark respecting the court life of Montezuma, he cites no less than thirty-seven authorities. Of course he would not have us understand that all these are of the same weight. In this comprehensive survey nothing seems omitted. From the method of electing the sovereign to the mysteries of the royal wardrobe ; from the conflicting powers of great feudatory lords, at first sight so analogous to the haughty barons whose power was then crumbling to pieces, to the intricacies of the Nahua cuisine, where the variety of preparations might appall Professor Blot ; from the domestic training which presents so much to approve to the modes of personal adornment which furnish no more to laugh at than the follies of our own day, — we have a range and variety of information which render this volume a compendium hardly less complete than those which the researches of generations of scholars have provided for us respecting the classical nations of antiquity. All that the volume lacks to make it a most satisfactory manual of American antiquities is the aid of pictorial illustration. We observe that while Mr. Bancroft criticises Prescott on some minor points, he does not throw any doubt on the general accuracy of that historian's statements respecting the civilization of the Aztecs.

After this elaborate account of the Nahua nations, it was less needful to describe the Maya, since in many points the resemblances are close. The sources of knowledge, too, are far less complete. All, however, that is positively known, the author has collected, though much of the information is merely fragmentary. The stupendous architectural remains of the Mayas, in this respect so much surpassing the Nahuas, are left for a separate volume. In his examination the author follows the same order as before. The general resemblances between the two races are evident, so much so as to render it almost certain that at some remote period they proceeded from the same stock, and yet most perplexing differences occur at every step. While Maya legislation, as a whole, was decidedly more lenient, we encounter the same bloody religious rites, though the Maya gods seem to have required far fewer victims. Eating human flesh, as part of a

religious ceremonial, was also practised, though here, again, not so extensively as among the Aztecs. Less attention was paid to dress and personal adornment. But it is impossible to analyze chapters which bristle with facts. The author earnestly argues that in the study of mankind a knowledge of American civilization deserves a place beside a knowledge of European, and that the Maya and Nahua nations after all would suffer but little in comparison with contemporaneous society in the Old World.

The third volume of the series is devoted to mythology and language ; and if it yields in interest to its immediate predecessor, the reason must be sought, not in any lack of thoroughness in the preparation, but in the inherent difficulty of the subject. After a preliminary discussion of the origin of language and myths, the author classifies the myths of the Pacific States under five separate categories, — myths of creation ; of physical nature ; of animals ; of the supernatural world ; and of a future state. This classification includes both the civilized and uncivilized races, ranging all the way from the poetic mythological conceptions of the Quichés of Guatemala to the dismal superstitions which supply the place of religion with the Eskimos. The religion of the Mexicans naturally claims, however, the largest space. This has come down to us as a confused mass of fragments, so that the best-established conclusions are far from being wholly satisfactory. Thus on the vital question whether the Aztecs recognized a single Supreme Power, Müller and Tylor are at variance with Klemm and Abbé Brasseur de Bourbourg. Passing from this obscure point, the author next considers the indubitable polytheism of the Nahua nations. The prayers which he gives as addressed to the great deity Tezcatlipoca might compare favorably with petitions sometimes offered in Christian pulpits. Then follows an account of the lesser divinity Quetzalcoatl, whom Mr. Tylor declares to have been the sun ; while Müller regards him as the representative national god of the Toltecs. This agrees substantially with the view advanced by Mr. Prescott, that he was a deified man. Yet Müller holds that this transformation must have had an original nature basis. To the great Mexican war god Huitzilopochtli a minute examination is devoted, the elaborate study of Müller being given almost in full. Here, when we might least expect it, the nature basis of the myth is most apparent. This grim deity was born of the Goddess of Plants, and his abhorrent rites were closely connected with the seasons. Next we have an account of the god of water and rain, Tlalve, to whom was paid the most pathetic of Mexican services, the sacrifice of babes. The "Mother Goddess" and various subordinate divinities close the survey.

When the author passes from myths to religious ceremonials, dealing once more with external facts, his difficulties lessen. His account of the temple revenues, the priesthood, the human sacrifices, rendering the worship of the Aztecs so sanguinary and monstrous "that it stands out an isolated spectacle," fills the mind with alternate wonder and disgust. Yet this brutal faith was, in its moral aspect, he assures us, purer than that of Greece, and, like more favored nations, the Aztecs cherished the confident hope of a new era. After a brief review of the deities of the lesser states, the author glances at the facts which go to prove the prevalence of Phallic worship. He constantly insists that in these strange analogies there is nothing that goes to establish any connection between the civilized races of America and those of the Old World. To the subject of the future state a separate chapter is devoted, the author maintaining that it was universally recognized, though he concedes that in the case of some of the hyperborean tribes the evidence is rather doubtful. But the ease with which Mr. Tylor demolished Baker's rash assertion that the White Nile tribes have no belief in a Supreme Being, shows how difficult it is for a passing traveller to form an opinion on this subject.

Almost a third of this volume is allotted to the most perplexing subject of language, the least satisfactory of all the discussions in the work, for the reason that the results seem so meagre and uncertain. Yet Mr. Bancroft thinks that he finds in the varied speech of the American tribes more evident signs of development than in anything else. In treating this part of his subject he reverses his usual method, and proceeds from south to north, presenting an approximative classification of the innumerable dialects which, to use his own words, "are spoken, grunted, and gestured between the Arctic Ocean and the Atrato." Compared with the endless confusion of tongues that prevailed on the Pacific slope, Babel must have seemed as harmonious as a village choir. Thus in the Mexican empire, besides the Aztec, more than twenty different languages were spoken. Of all languages the Aztec was the most copious and elegant, though the name of a plant which Mr. Bancroft gives — mihiittilmoyoiiccuitlatonpicixochitl — inclines us to suspect that it may have been somewhat less musical than Apollo's lute. But we must remit this portion of Mr. Bancroft's labors to the comparative philologists.

The last of the volumes now before us discusses monumental archæology, and contains a detailed description of all the historical remains found on the Pacific coast, with a general view of the antiquities of South America and the Mississippi Valley which are illustrative of these. The author is sensible that in undertaking such a

survey he invites comparison with writers who have added the charm of personal adventure to dry antiquarian details, and have made the subject familiar by accurate and splendid illustration; but by condensing into a single volume the researches of five hundred travellers, allowing them to correct or to corroborate each other's statements, he renders the reader a different but not less essential service. Full references are given to all the authorities consulted, the notes becoming thus an index to all that has been written on the subject. Another valuable feature is the full bibliographical summary illustrating the successive explorations of the more important ruins. The volume is also amply illustrated with woodcuts, many of which are originals taken by permission from the published works of explorers. In his descriptions the author proceeds geographically from south to north, following this method simply from convenience, and constantly comparing the remains of each geographical section with those of the section just described. Under the term "antiquities" he includes all the works of aboriginal hands presumably executed before the coming of the Europeans. In the central region these remains are doubtless included within an historical period, but in the north the miners' shafts have brought to light relics of a far earlier epoch.

In pursuance of his plan, Mr. Bancroft begins with the antiquities of the Isthmus, where the remains of the Muiscas present a marked contrast to Peruvian civilization on the one hand, and to Maya and Aztec civilization on the other. Proceeding northward the author gives the little that is known of Costa Rica and the Mosquito Coast, pausing with the more plentiful supplies of Nicaragua, where the rock sculptures at Massaya furnish the earliest trace of picture writing, and the uncouth idols of Zapatero and Pensacola islands introduce us to the most striking specimens of native art. We pass next to Salvador and Honduras. While of the ruins reported to exist in the former state we have no satisfactory account, on the other side of the continent, with an enormous quantity of other remains, we meet with one of the most famous of American monuments, — Copan. Though these wonderful structures seem to have been explored in the reign of Philip II., they can hardly be said to have been revealed to the public till the visit of Stephens and Catherwood. Guatemala, which is next described, has thus far yielded nothing of great importance; but passing to Yucatan, we enter the richest field for archæological research that the North American continent presents. The territory is literally dotted with ruined cities and edifices, forty-four having been explored by Mr. Stephens alone. Only since 1830 has the veil been lifted from this mysterious region, and it is by no means certain

that the grandest remains have yet been described. The author classifies the antiquities of Yucatan in four groups; Uxmal, of course, claiming the first place. He holds that, beyond question, these works were of Maya origin, but makes no attempt to fix the date. In Tabasco nothing has been discovered, and the physical aspect of the country is such as to render it unlikely that more thorough exploration would lead to any important result; but in Chiapas we have the extraordinary edifices at Palenque, which were first adequately depicted by the late Count Waldeck, whose recent death in Paris, in his one hundred and tenth year, was so widely noticed in the papers. Not till we reach the Isthmus of Tehuantepec do we encounter any remains of Nahua civilization. The finest of these are the palaces at Mitla, with their unique mosaic patterns. The province of Vera Cruz yields a variety of interesting relics; and climbing the Central Plateau we have near Puebla the famous pyramid of Cholula. In the valley of Mexico, where we would naturally look for the most numerous architectural works, we find nothing of importance. The zeal of the Spaniards was more unsparing than time. The curious stones that still exist were preserved by accident. The northern states, though abounding in ruins, present nothing that for interest can be compared with those already named. The Casas Grandes of Chihuahua and the Gila and the Chaco ruins are the most remarkable. The volume concludes with a succinct account of the mounds and embankments of the Mississippi Valley, and with a brief chapter upon Peruvian antiquities, the connection of which with the general subject of the work is not apparent. In a fifth and concluding volume, Mr. Bancroft promises to discuss the difficult questions connected with the origin and migration of the Pacific races.

From this brief outline our readers will gain a tolerable conception of the comprehensiveness of Mr. Bancroft's undertaking; but only an inspection of the work itself can enable them to appreciate the amount of labor that the preparation has involved. It would be hardly becoming to attempt an estimate of the value of the addition thus made to our historical literature until the whole has been placed before us, but we have no hesitation in saying that as an encyclopædia of authentic information relating to aboriginal America nothing has yet appeared that can be compared with it. The author's enthusiastic devotion to the subject has led him, we think, to overestimate the civilization of the central table-land, at least if we are right in understanding him to indorse the extravagant remark of Dr. Draper, "that it might have instructed Europe"; and perhaps the abler hands, for which he professes simply to forge the weapons,

will prefer the original sources to the most careful compilation. But he has succeeded in reducing an enormous mass of material to most admirable and convenient shape, and has supplied bibliographical assistance of inestimable value. The student who has access to the costly folios of Kingsborough and Catherwood and Waldeck will still find his researches facilitated by Mr. Bancroft's labors, and will have occasion to thank him, at every step, for opening so plain a path through such a vast and bewildering field; while to the ordinary reader, who is seeking for accurate information in the most compendious shape, these volumes supply a store of digested knowledge which the most industrious effort of an ordinary lifetime could hardly bring together. Eastern scholars may well look to their laurels when such careful work comes to us from the Pacific coast.

7.—*Storia della Repubblica di Firenze* di GINO CAPPONI. Firenze. G. Barbera, Editore. 1875. 2 Vols. pp. xxiii, 667; xix, 632.

THE past year has been prolific in works relating to Italian history. Besides Gregorovius's "Lucrezia Borgia," * Alfred von Reumont has written what is destined to be the authoritative history of Lorenzo de' Medici and his times, and now we have the long-looked-for history of Florence by Gino Capponi.

The noble author, when he presented a copy of his work to the *sindaco* of Florence, wrote in it, "*A Ubaldino Peruzzi gonfaloniere di Firenze il suo scrivano*"; and Capponi is indeed worthy of being added to the already long list of illustrious *scrivani*, as the old historians of the republic were called.

The name of the author enhances the charm that the history of Florence has always had for scholars, a history the value of which is twofold. It is not only that for three hundred years the history of Florence is the history of what is best in Italian literature and art, but the political history of the city is of even deeper interest, and affords lessons of vital importance at a time when our own republic is preparing to celebrate its hundredth anniversary, and two European nations have recently passed through crises which in one have destroyed a short-lived republic, in the other perhaps assured its continuance. There is much to be learned from the city of Dante, Boccaccio, Cimabue, Arnolfo di Lapo, Orcagna, Poggio Bracciolini, Poliziano, Masaccio, Machiavelli, Brunelleschi Ghiberti, Michael Angelo, and a host of others whose names are among the brightest in

* North American Review, No. CCXLVIII.

literature and art; but there is even more to be learned from a city that preserved more than three hundred years its self-government, under which it enjoyed a measure of prosperity that made it the wealthiest and most influential city of mediæval and early modern Europe.

There is fortunately no lack of materials for the history of Florence (except in the very earliest period), whether original, in the shape of documents, etc., preserved in the archives of the state, or secondary, in the form of edited and inedited chronicles and histories.

The series of native contemporary historians and chroniclers extends without a break and with many overlappings from the Male-spini, whose chronicle (the authenticity of which has been lately attacked) ends in 1286, down to Machiavelli, the first historian worthy of the name, who closes his work with the death of Lorenzo the Magnificent in 1492. From that date to 1532 (the year of the overthrow of the republic), there are numerous minor historians, such as Nardi, Varchi, Segni, Nerli, Pitti, Adriani, Ammirato, and — greatest name in the long list of native historians — Francesco Guicciardini. These writers, however, cover only limited periods, or are tiresomely prolix, as in the case of Ammirato, whose history in 1532 occupies over nine large octavo volumes.

The want of a more compendious history of the city was in a slight measure supplied by Pignotti, *Storia della Toscana sindò al Principato*, nine volumes, a work not so much valued for its historical portion as for its interesting digressions on the art of war in early times, the Renaissance, commerce, letters, and arts. This work was translated into English and received with favor.

In 1846 Captain Napier, of the British Navy, published his Florentine History, six volumes, extending to the accession of Ferdinand III., in 1790. This work is valuable for its correctness and the fulness of its materials, but deficient in its arrangement, prolix, and unfitted for general readers.

The first really popular history of the Florentine Republic was that by T. Adolphus Trollope,* which is tolerably clear and complete. Its greatest blemishes are a want of historical grasp, and a style, in many places, undignified and trivial.

It will be seen from this hasty review, that there is still room for a good history of Florence in Italian or English. This want has been lately supplied for the Italians by the publication of the work whose

* "A History of the Commonwealth of Florence from the earliest Independence of the Commune to the Fall of the Republic in 1531." 4 vols. London : Chapman & Hall. 1865.

title stands at the head of this notice, and the author of which is a member of one of the most illustrious families of the state whose history he has so worthily written. There is no Florentine of the present day better known than the Marquis Gino Capponi. He was born in 1792, and, after a very careful education, travelled extensively through the most important European states. He held important offices under the Grand Dukes Ferdinand III. and Leopold II., and early displayed a literary activity devoted entirely to patriotic objects, which his blindness since 1839 has not diminished. He has contributed to the *Archivio Storico Italiano*, and to various periodicals many articles on the history and literature of his country. He has been the trusted friend of such men as the poet Giusti (who died in his house in 1850) and Tommasèo, and his palace has been the resort and refuge of the advocates of Italian independence, of which he himself has been one of the most enlightened and indefatigable champions.

He gives in the Preface to his history an account of its origin. In 1843, Madame Allart, a French authoress, published a sketch of the history of the Florentine Republic, which was translated into Italian. Gino Capponi, in reading it, naturally found it, in some respects, too full, in others, too condensed, for Italians. He began almost mechanically to annotate it, and make some changes in the French text, and so gradually was led to undertake a complete and independent history of Florence. The author's object was to write a popular work in the best sense; a work which should be interesting and intelligible to those who had not made the history of this republic and period a specialty; a work that should put before the general public, in a clear and attractive manner, the political lessons which may still be learned from a state that gave up its independence more than three hundred years ago. The author has not given a mere compend of previous histories, but has produced a work original in every sense. He has not only used already known materials, but has also employed those recently discovered, as, for instance, the posthumous works of Guicciardini, the various contributions to Italian history published in the *Archivio Storico*, and a large mass of inedited matter from the archives of the state and of his own family. These last throw new light over one of the most important and interesting episodes of the republic, from the middle of the fourteenth to the end of the fifteenth centuries,—the period in which the baleful influence of the Medici made its first appearance and assumed its fatal proportions. As the author's desire is to give not only an idea of the political history of the republic, but also of its intellectual activity, he has, at the termination of each historical period, given a terse account of the principal authors,

artists, etc. For instance, at the end of Book II. (1268 – 1322), there is a chapter on Dante and contemporaneous writers and artists ; Book III., language, letters, and arts in Florence, Petrarch, Boccaccio ; Book IV., classical studies in Florence, great increase in the fine arts ; Book V., science, letters, and arts under the republican government of the Medici (1434 – 1494), — the Tuscan language becomes Italian. At the end of this chapter the author gives a sound opinion, which philological agitators will do well to bear in mind : “Were I to hazard a prediction in regard to the future of the language of Italy, I would say, in a word, the language of Italy will be whatever the Italians themselves shall be able to become.” At the conclusion of Book VI. there is a chapter on Machiavelli, Guicciardini, and Michael Angelo, and a description of the city and state of Florence.

In an appendix at the end of each volume is given a selection of the most important illustrative documents, many of which are here published for the first time ; among them are numerous *provisioni* of great value for the early constitutional history of the state.

The author passes rapidly over the early history of the city, — a period buried in obscurity ; the oldest chronicler, Malespini, being of dubious authenticity.*

* It is surprising that Florentines have done so little in the way of investigating the early history of their city. They have always considered Malespini their oldest chronicler, and have been content to say that Villani appropriated from him all that he had to say about the early history of Florence. In 1870, Paul Scheffer-Boichorst, in Sybel's *Historische Zeitschrift*, XXIV. 274 – 313, undertook an elaborate examination of Malespini's chronicle, and came to the conclusion that it was a forgery, and that Malespini had copied Villani. Among the sources of Villani is the *Gesta Florentinorum*, which has been lately edited for the first time, also by a German scholar, Dr. Otto Hartwig : *Quellen und Forschungen zur ältesten Geschichte der Stadt Florenz*. Erster Theil, Marburg, 1875. This work contains an essay on the chronicle *del Guidice Sanzalone* (cited by Capponi), which ends in 1231. Hartwig also gives for the first time the *Chronica de origine civitatis Florentinae*, and a dissertation of his own on Florence from its foundation, about 190 b. c., to the beginning of the twelfth century. He shows how the city was refounded by Augustus, who named it Julia Augusta Florentia. The story of the destruction of the city by Totila (*alias Attila*), and its rebuilding by Charlemagne, is shown to be legendary. The second part of Hartwig's book, which is nearly ready for the press, is to contain extensive commentaries on the earliest annals, a complete list of the consuls and *Podestàs*, a dissertation on the so-called *Chronicon Brunetto Latini*, and a reconstruction of the annualistic *Gesta Florentinorum*, from which Villani and other historians of Florence derive nearly all their knowledge down to the year 1308. In 1874, Scheffer-Boichorst published his *Florentiner Studien*, in which he reprinted his essay on Malespini, and boldly attacked the celebrated chronicle of Dino Compagni, the Italian Sallust, as he has been called. The authenticity of this chronicle has been called in question before by Italians, but never investigated so elaborately as by Scheffer-Boichorst. Capponi, in common

The first book of Capponi's history extends to 1267, and ends with the final victory of the Guelph party which in the future ruled the republic in its peculiar way. In this period we find the rise of the two evils that finally ended in the ruin of the commonwealth : bitter party strife, and class legislation without the least comprehension of what we call liberty of the individual citizen. The party strife of Florence was a very remarkable thing, more so than those think who read the story of Buondelmonte in the *Pecorone* (the author of which wrote it, as he did most of his historical stories, almost word for word from Villani) or Dante's fierce invectives. It was a curious sort of commonwealth where the defeated party quietly rose up with their wives and little children and left their homes, often in the dead of night or in the midst of winter, to seek shelter in some neighboring town where their party was in the majority. These exiles formed that curious body of non-resident citizens termed *fuorusciti*, who played an important part in the history of Florence long after it had ceased to be an independent state.

In 1249 the Ghibelline party, with some outside help from the Germans (this calling in foreign help in domestic matters is characteristic not only of Florence but of the rest of Italy), compelled the Guelphs to leave the city. The next year the people rose against the Ghibellines, "reformed" the government, and recalled the Guelph *fuorusciti*, whereupon many noble Ghibelline families left the city and entered into a league with Siena (a stanch Ghibelline city) against Florence. The city now took its place as head of the Guelph party, a position it retained until the famous battle of Montaperti (September 4, 1260), which, as Dante's readers know, resulted in the defeat of the Guelphs by the aid of Manfred. The Florentine Guelphs when they heard of this defeat did not even await the approach of the victors, much less think of defending the city against them, but left the city in tears and betook themselves with their families to Lucca. Later came the no less famous battle of Benevento ; again the Guelphs were recalled and the government reformed, taking this time a shape it preserved many years. This last victory of the Guelphs was final, and henceforth the names of the two great parties lose

with many other distinguished Italian scholars, cannot give up the two oldest and most interesting historical and literary monuments of his city. In an appendix, Capponi states his belief in the authenticity of both Malespini and Compagni. We notice that he also quotes the *Diurnali* of Matteo Spinelli da Giovenazzo, which we believe has been proved beyond a question to be a forgery of the sixteenth century. The subject has been admirably treated by Wilhelm Bernhardt in his study, entitled *Matteo di Giovenazzo, eine Fälschung des XVI. Jahrhunderts.* Berlin, 1868.

their significance for Florence as they do in a measure for the rest of Italy. The names, however, remained, that of the Guelphs until a quite recent date in a very curious manner that illustrates the weakness of the commonwealth. In 1268 and 1269 about three thousand Ghibellines or suspected Ghibellines were condemned to exile or allowed to remain in Florence, in both cases with confiscation of their property. Many of the first class abandoned Italy and founded commercial colonies in the South of France. To oversee the confiscated property, and take proper measures against the exiles or suspected Ghibellines, the people created a board of officers at first named *Consoli de' cavalieri*, then captains of the Guelph party. These officers were renewed every two months by a secret council of fourteen and a greater council composed of sixty nobles and people. Party spirit has rarely, even in this country, so unblushingly asserted itself. So it went on from generation to generation; long after the old names were forgotten the old spirit remained.

The oppression of one class of citizens by another has never, we believe, been carried so far by statute as it was in Florence in 1293, and the celebrated laws then enacted against the nobles are known as the *Ordinamenti* or *Ordini della Giustizia*. The people were bound, under pain of fine, to denounce all violations of the law by the nobles, and when the latter, to escape proscription, became "people," they were obliged to select a new coat-of-arms. There were also elaborate arrangements for elevating "people" to the rank of *grandi*, in order to bring them within the reach of this extraordinary legislation, and finally there was provision made for secret denunciations.

There is, however, a bright side to all this; the exuberant life and restlessness that frequently manifested themselves in violence also found a healthy vent in peaceful enterprises of all kinds, which have made an honorable memory for those days. We have no space to follow Capponi into the interesting minutiae of the multitudinous forms of the Florentine constitution, with its ceaseless changes, which caused Dante to cry out with bitter irony:—

"Atene e Lacedemone, che fanno
L'antiche leggi, e furon sì civili,
Fecero al viver bene un picciol cenno
Verso di te, che fai tanto sottili
Provvedimenti, che a mezzo Novembre
Non giunge quel ché tu Ottobre fili.
Quante volte nel tempo che rimembri,
Legge, moneta, officio, e costume
Hai tu mutato, e rinnovato membre!" *

* Purgatorio, VI, 139–147.]

With the year 1433 began a new and fatal era for the republic, but an era so splendid for art and letters that its iniquity is half concealed. In the year above mentioned Cosimo de' Medici was banished from the city which he re-entered in triumph the following year, and where he laid the foundation of a power that remained in his family over three centuries. The history of the Medici, and especially of its brightest member, Lorenzo the Magnificent, has lately been treated in the most profound and attractive manner by the German diplomat and scholar, Alfred von Reumont,* a life-long friend of Gino Capponi, in a work so deserving a separate notice that we will pass over this period, merely remarking that Capponi treats it with characteristic impartiality and appreciation. It was a period of great apparent material splendor, and few Italians or foreigners have escaped its infection. They have generally forgotten that the Medici strangled the republic, plundered its treasury, and corrupted its morals; they remember at this day only the treasures of the Laurenzian library, and the revival of letters.

Capponi gives a clear and impartial history of this period, with but little subjective intrusion. This indeed is one of the chief features of the whole work,—the historian is seldom seen, and only the events he narrates seem to address us.

We would like to linger over the sixth book of his history. What a period from the death of Lorenzo de' Medici to the fall of the republic! No wonder that it is the favorite ground of the novelist and poet; what figures those of Savonarola, Pier Capponi, Machiavelli, and Michael Angelo, what scenes the Friar's tragic death and the siege of Florence!

Capponi's account of all these men and events is singularly vivid and sympathetic, his judgments severe and impartial. We cannot speak in too high terms of Capponi's style. It is sober, elevated, and restrained, and withal so easy and picturesque that one reads on from period to period without finding a place to pause. The author, it is needless to say, is a master of his native language, and his work is a noble contribution to Italian literature.

We trust that an English translation or abridgment of this excellent history may soon put it within the reach of those who are not familiar with Italian.

* *Lorenzo de' Medici il Magnifico.* Von Alfred von Reumont. Leipzig, 1874.
2 vols,

- 8.—*Allgemeine Geschichte der Literatur des Mittelalters im Abendlande*, von ADOLF EBERT. Erster Band. *Geschichte der Christlich-Lateinischen Literatur von ihren Anfängen bis zum Zeitalter Karls des Grossen*. Leipzig. 1874. 8vo. pp. xii, 624.

NOWHERE is the progress of modern scholarship so apparent as in the change which has taken place in the methods of literary history. It is true that this change is, from one point of view, a confession of weakness; from another, it is merely an acknowledgment of the limits which nature has placed to all human efforts.

The old school of literary historians thought their task accomplished when they had given more or less complete biographies of the principal authors, with lists of their works, and, occasionally, extracts or criticisms. The new school recognizes in literature the highest exponent of the national life of a people, and seeks to explain the origin and growth of a literature by reference to the political and social history of the nation. When this shall be combined with an accurate account of individual writers and sound criticism of their works we shall have a perfect literary history. This explains the rarity of good histories of literature, and why they always appear so late. It is difficult, if not impossible, for any one man to make the original researches involved in a history of any literature and language in their relations to the national life of a people. A good literary history presupposes the labors of generations in particular fields.*

The book before us fulfils in so remarkable a degree the requirements of a perfect literary history, that we do not hesitate to pronounce it a model work, and recommend the study of its plan and execution to all those interested in this department of literature. It is, as the general title states, the first volume of a work intended to embrace the entire mediæval literature of Europe, and contains the history of the Christian Latin literature from its origin to the time of Charlemagne.

There is no need at this day of dwelling upon the want of a good history of mediæval literature. There are many excellent monographs upon separate authors and periods, the various literatures have more or less complete histories, but a thorough and comprehensive survey of the whole field was wanting. Such a history, written

* See admirable essay on *Settimbriniedi suoi Critici*, by F. De Sanctis, in *Nuovi Saggi Critici, Napoli*, 1872.

from the stand-point of modern criticism, will overthrow many of the prejudices fostered by an ignorance of a period so incorrectly termed the Dark Ages.

In our opinion one of the greatest services done to literature by the Romantic school was the radical change it wrought in certain canons of taste and criticism which had previously been applied to literary productions. An excellent example of the old school is found in Bouterwek's *Geschichte der Poesie und Beredsamkeit seit dem XIII. Jahrhundert*, the object of which, the author states, is "to trace the progress of taste."

For Bouterwek and his school the real mediæval literature was "Gothic," which with him was synonymous with barbarous. Hence his contempt for popular works, his slighting criticisms of such poems as the Cid in Spanish, and his fragmentary treatment of everything except the classical periods. The results of the Romantic reaction are too well known to be dwelt on here; those who wish to find these results, as applied to literary history, in their most perfect form will do well to read Ferdinand Wolf's masterly review of Bouterwek's History of Spanish Literature in his volume of *Studien*.

Aside, however, from all æsthetic questions, the literary history of the Middle Ages is valuable and interesting for two reasons: it reveals the existence of a universal literature such as has existed at no time before nor since, and it establishes the continuity between the culture and learning of the ancient and modern world. The universal literature (*Weltliteratur*) which Goethe expected from the future already existed during the Middle Ages; as Ebert remarks in his Preface: "As the culture of Europe during this period is a common one, the product of the influence of the Germanic and Roman nations upon the basis of classical culture, and not the classical Roman-Greek alone, but also the Oriental-Greek, i. e. specifically Christian; so the literature proceeding from this culture, of which it is the expression, is also a common, homogeneous organism. Before the German and Romance languages were sufficiently developed for literary purposes, the language of the mediæval literature of Europe was a common one, the Latin, and this it remained for a long time in separate literary fields, until it gradually, here sooner, there later, was crowded out by the national languages which had arisen by its side. So a common Latin mediæval literature not only precedes the literatures of the European peoples, but for a long time goes hand in hand with them. The language of this literature was not a dead one: it was not only written but spoken; it was not only the language of Science and Religion, but also of the State; it was heard in the drinking-

song as well as in the street-songs of the *Vaganten*; for a long time it influenced and was influenced by the popular languages, the style of which it formed, and not only increased their store of words but borrowed from them as well as created many new words from their own roots, the best proof of its own life! This Latin literature therefore forms an integral part of that literary organism; without a knowledge of it a full comprehension of the history of one of the separate national literatures is as little, nay, less possible, as without the knowledge of the other most important sister literatures.

"It has, as it were, reared the national literatures: it has not only given them examples and models for their various departments, but under its influence the poetic forms as well as the prose style of the national literatures have been developed."

This Latin literature is the subject of Ebert's first volume, and he follows it back to its beginning, a date, it is true, which lies far beyond the boundaries of the Middle Ages. This was, however, necessary both for the historical comprehension of the subject, and in order to show clearly the transmission of the elements of culture which this Latin literature contains, and which determine the character of the Middle Ages, as well as its national literatures. Ebert considers this Christian-Latin literature only in its relation to mediæval literature and as a part of it; consequently he examines only the literature which was universal, which represented the later national literatures and directly influenced them. Hence he excludes scientific literature, except in so far as it influenced the entire Christian society of the day; so, for instance, he only mentions exceptionally dogmatic-speculative and polemic-theological works.

So much for the fundamental idea of the work which is carried out in a masterly manner; and the result is a book of interest even to those whose attention has not been specially directed to this field, which for so long a time has been considered the exclusive domain of the theologian.

A glance at the table of contents will show how few of the great writers of this period have come down to us; a few we know merely by name, some are remembered as the authors of hymns which are still sung by the modern church. The greater number, however, are as forgotten as though they had never lived; nevertheless, Ebert has been able to invest them with a personal interest; he gives excellent biographies of the individual writers and careful analyses of their works, which enable those not previously acquainted with them to follow the author's argument perfectly, and, if need be, correct it by his own materials. The author himself, in his Preface, says that he

has expended the greatest industry upon this part of his work, as he considers it of the highest importance. He gives not merely the simple contents of a work, but endeavors to show its composition, its divisions and their grouping, its transitions, and thus objectively the being of the work and the art of the author; and, while giving the reader a clew to the whole work, he has, by the citation of chapter, verse, etc., made it possible for him to acquaint himself more thoroughly with particular points. Such details as are of special importance for mediæval literature have been introduced into the analyses or notes. The present volume is divided into three books: the first embraces the period from Minucius Felix to Constantine, the second to the death of Augustine, and the third to Charlemagne. The first book is preceded by an Introduction, in which is given an admirably clear view of the spread of Christianity and its final victory.

As an example of Ebert's method, we will select one of the most interesting figures of the whole work, — Tertullian. In a note the author gives a list of Tertullian's works, indicating the editions he has used by an asterisk, together with the most important monographs, etc., relating to the subject.

The first great Christian writer, the advocate Minucius Felix, represents the school whose object was to assimilate the classical Hellenic-Roman culture to the genius of Christianity. The second great name, Tertullian, the contemporary of Felix in his youth, represents an entirely opposite tendency. This new direction, influenced by anti-Roman, Oriental-Semitic culture, places no value on the beauty of external form and completeness. The writers of this school belong principally to Africa, and its representative man is Quintus Septimius Florens Tertullianus, born in 160 A.D. at Carthage, the son of the Roman proconsul's centurion. His parents were heathen, and he received, as his works plainly show, all the culture afforded by his native city, then one of the principal seats of learning in the Roman Empire.

He was so familiar with Greek, that he wrote later as a Christian several works in that language which have unfortunately been lost. His eloquent style shows that he visited the schools of rhetoric with profit. It seems probable that he devoted himself to the study of law, with the intent to make it the profession of his life. While still young he became a Christian and a presbyter in Carthage. His conversion was brought about by the constancy of the martyrs and the power of the Christians over those possessed by evil spirits. He soon developed in the interest of his new faith a literary activity that reached its height under Severus and Caracalla. In middle age he openly joined the sect of Montanists, to whose religious views his disposition

must have inclined him from the beginning. From their stand-point not a few of his writings are composed, in which he attacks the Catholic Church as fiercely as he formerly had heathendom. According to Hieronymus he reached an extreme old age, and must have died towards the end of the first half of the third century.

Ebert then gives a concise account of him as a writer, and characterizes him as one of the most genial, original, and productive of the Christian-Latin authors. Then follows an account of his philosophical tendencies and doctrines, and an examination of his style and Latinity. It is customary to term the latter "African," and thus explain all that is exceptional and surprising. This is very incorrect; Tertullian borrowed from the entire field of conversational Latin, and what are usually called Africanisms are almost all those peculiarities of the Roman conversational and familiar language which are preserved in the Romance languages, which no one now thinks were developed in Africa.

Tertullian's writings are divided into three classes; those of an apologetic and polemical nature, didactic, and polemic-dogmatic writings directed against the heretics, Jews, and, from his Montanistic stand-point, against the Catholic Church. These works are all carefully arranged and examined in turn, analyses are given, and references by book, chapter, and page to the most important passages. These *résumés* and analyses cannot be too highly praised; they are models of condensation and completeness, and enable the general reader, as we have before remarked, to follow perfectly the author's line of argument. Such is an incomplete outline of Ebert's method. It must be borne in mind, of course, that his work is not a mere collection of separate articles, but a continuous and well-united historical survey of the literature of the period, and the circumstances, political and otherwise, by which it was controlled and modified.

It is sincerely to be hoped that the author's age and duties as a general writer and university professor will permit him to finish a work for which his varied attainments, and not least his great ability as a bibliographer, so admirably fit him.

9.—*Essays on the Languages, Literature, and Religion of Nepal and Tibet, etc.* By B. H. HODGSON, Esq., etc. London: Trübner & Co. 1874.

As regards communicating information to others, next best to knowing a thing is the not professing to know it; for right there is

none to draw any positive inference from silence. Pretence of any kind is bad enough, too ; but, of all the kinds of it, pretence in print is the most pernicious. Bred of conceit, it propagates its image ; and an age of smattering and hazy writers is sure to beget a numerous progeny of smattering and hazy talkers. Ours is an age which teems with smatterers of both these descriptions. Sound scholarship it does not, indeed, want for ; but its unsound and superficial scholarship preponderates beyond all precedent. Moreover, there is a growing fashion of handling all manner of subjects as if they were so many branches of mathematics. We find the merest whims and the most audacious generalizations propounded with an air and an attitude entirely misbecoming anything short of accredited omniscience. Nor are our contemporary dogmatists content with offering themselves as strict adherents to demonstrables and demonstration. To be infallibly in the right is by no means enough for them. All who differ from themselves are not only hopelessly astray, but deserve, they imply, to be held up, and accordingly are held up, as objects of scorn and contempt. Any one who is familiar with books and periodicals published, during the last twenty years, by the more recent Oxford graduates, will be able to recall abundant exemplifications of what is here indicated. However, though Oxford and our time supply such exemplifications more copiously than any other place and time, they are far from being monopolists of them. It may be suspected that modesty has nowhere and never manifested itself in any distressing superfluity.

These reflections have been induced by the book now before us. A laborer who turns up an ancient inscription is not expected to unravel its meaning. "B. H. Hodgson, Esq.," is exactly in the position of such a laborer, when, not satisfied with doing his proper work, and receiving his reward, he insists on adding decipherment to delving. Every fresh chapter of his volume that we read shows us, more and more conclusively, that he is what the Germans call an *autodidakt*. Whatever his natural aptitude may be, he gives no proof at all of having acquired that methodical and scientific culture without which it is worse than useless to deal with such matters as he weaves enigmas about through hundreds of pages. It was a mistake in him to aspire to anything further than the praise which is justly his due, as a purveyor of raw material to the learned. If his ambition has provoked, by its failure, a derision which tends to involve his undeniable desert somewhat in eclipse, he has only himself to blame for so untoward a result. But we must rehearse what he has done, and also what he has tried to do, but with disastrous miscarriage.

In the days of the East India Company, now extinct, the Governor-General of India had an agent, of his own appointing, stationed in Nepal. Mr. Hodgson filled the post for some years, but at last was summarily removed by Lord Ellenborough ; and one cannot marvel at his removal, if his diplomacy was no better than his philology. On his title-page, however, he denominates himself "late British Minister at the Court of Nepal," a magnifying of his office at which those who are acquainted with East Indian affairs must be moved to smile. While living in Nepal, Mr. Hodgson, mindful that Buddhism, which has long disappeared from Hindustan proper, still survived there to some extent, instituted inquiries after its literary monuments in their original language, Sanskrit. With the exception of the *Lalitavistara* and sundry unimportant fragments, possessed by Sir William Jones and others, it was thought that these monuments had perished irrecoverably. But Mr. Hodgson had the good fortune to ferret out and secure Buddhist Sanskrit manuscripts to the number of several hundred. Copies of them were sent by him to France ; and thereupon he was elected Corresponding Member of the French Institute and Chevalier of the Legion of Honor. That these compliments were well merited is universally acknowledged.

"I am not a Sanskrit scholar," Mr. Hodgson, in so many words, ingenuously informs us ; and yet he has undertaken a task which no one but a most profound Sanskritist could hope to accomplish. With the aid of a native of Nepal, he has attempted to give us, from Sanskrit sources, an account of the Buddhist religion and philosophy. Now, the terminology of Hinduism is quite perplexing enough ; and, after all the study which Sanskritists have bestowed on it, the riddle is as yet only partly solved. But the Buddhists, in setting forth the very elements of their belief, employ scores of Sanskrit words in senses altogether peculiar ; and what these senses are we, in many cases, discern, at present, but very dimly, and mainly through the researches of the lamented Burnouf. To Mr. Hodgson, however, all these things are trifles about which, between his own intuition and the aid of his pandit, no one need have any hesitation. On one occasion he is, indeed, "sensible" that he has vented "a sad jumble of cloudy metaphysics." Even so : but the fact does not in the least dishearten him ; and he drives on exactly as if all before him were as plain as noonday. With enviable self-complacency, and with presumption perfectly astounding, he feels compelled, notwithstanding the insuperable disadvantages under which he is laboring, "to avow, in the face of the world, my conviction that, whatever the Chinese and Mongolian works on Buddhism, possessed by the French *savans*,

may contain, no intelligible views were thence derived of the general subject before my essays appeared, or could have been afterwards, but for the lights those essays afforded." Should anybody, nevertheless, succeed in finding better than bewildering rigmarole, and a perilously close approach to pure nonsense, in Mr. Hodgson's expositions, we must give him credit for a faculty of seeing through fog and millstones far surpassing such as we can lay claim to.

With reference to Buddhism in India, Mr. Hodgson declares : "The decline of this creed in the plains we must date from Çankara's era, but not its fall ; for it is now certain that the expulsion was not complete till the fourteenth or fifteenth century of our era." Of this last assertion no proof is advanced ; and we strongly suspect there is none to advance. The opinion that Buddhism survived till a comparatively recent period in India, seems to be Mr. Hodgson's peculiar property. Further, far from dating the decline of Buddhism in India from the time of Çankara, we are to date it something like a thousand years earlier, that is to say, before the time of Christ. Again : "I could bring forward many other presumptions in favor of the notion that the Jainas are sectarian Bandhas." If they be so, it is a remarkable circumstance that, as far as is known, the Jainas nowhere own that their creed sprang from that of the Buddhists ; and no such relationship is even hinted at by Hindu controversialists, in their polemics against the two religions. Once more : "I incline to the opinion that Hindu may be older, in India, than Sanskrit." This is, for all the world, like antedating French to Latin ; and the merest tyro in Indian philology could here refute Mr. Hodgson. As well might one contend that Brahmanism originated from Buddhism, a position which we are surprised to find that our author does not advocate. The preceding extracts might be supplemented by many similarly erroneous.

As respects etymology, Mr. Hodgson is at his usual level, and is just what we look for in a person who lacks ordinary prudence, and is "not a Sanskrit scholar." *Naipâla*, he says, is the Sanskrit name of *Nepal* ; therein mistaking for *Nepâla*, its adjective ; as if one were to confound *American* and *America* ; and he derives *Naipâla* from "ne, 'the sender to Paradise,' " and "pâla, 'cherished,' " etc. There is no Sanskrit substantive *ne* ; and *pâla* means "cherisher." The origin of *Nepâla* is, as yet, unknown. Probably it is Sanskrit, just as *Yavana*, for "Ionian," is Sanskrit. *Nirvritti*, which he takes from *vâ*, "to blow," he asserts to be the parent of *nirvâna*. *Nirvritti* he has mistaken for *nirvriti* ; and the latter is based on *vri*, whereas *nirvâna* is based on *vâ*. *Vandya*, we read, "is derived from *vandana*."

If so, *calculable* grew out of *calculation*. But we have said enough on such points. In the article of English, we can hardly admire Mr. Hodgson's *controversist, parallelic, posteally, priorly, remanation, subappellate*, etc. ; and it is no defence of his *disseveration* that the French once had *dessevreison*, an argument which we make him a present of. He uses *unitize* for *unify* ; and he stuns us with his "diagnostic pronomenalization" (*sic*), to mean Heaven knows what.

There is a certain interest attached to Nepal and its people ; and it is for this reason, chiefly, that Mr. Hodgson's dissertations on them have claimed our notice. The unwary are to be warned from meddling with him : such is the sum of what we have to say. His rank as an authority is in the same category with Colonel Tod, Colonel Sykes, and other dwellers in the East, who have ventured on literary enterprises beside their bent and beyond their strength. We have to add, that his volume is wretchedly edited, we are not told by whom, and that, though it has notes by the author dated in 1873, it contains not a few contradictions which, if he half knew his own mind, would not have been allowed to appear. The "List of Additions and Corrections," which is disgracefully copious, requires as much emendation as the text itself, not to speak of its referring, again and again, to things as being in the book, though they are not there. Mr. Hodgson's editor promises "another volume or two," if this one shall meet with a favorable reception. He will certainly stop where he is, if well advised.

10.—*Social Science and National Economy.* By ROBERT ELLIS THOMPSON, M. A., Professor of Social Science in the University of Pennsylvania. pp. 438. Philadelphia : Porter & Coates. 1875.

To those of our readers who are not familiar with the nomenclature of the Philadelphia school of economists and their German coadjutors, it may be worth while to say, at the outset, that "Social Science and National Economy," on the present title-page, mean little more than the familiar term, "Political Economy." Our author does, indeed, carefully draw his distinction between social science, or "that branch of the science of man which treats of man as existing in society and in relation to his material wants and welfare," and national or political economy, or "the related art by which this science is carried into practice." There are, he tells us, certain natural laws, compliance with which leads to material well-being or wealth, while disobedience leads to poverty ; "to learn what

those laws are is the business of the student of social science ; to govern a nation according to them is the business of the statesman, and is the *art* of national economy." And, accordingly, we have chapters entitled, "The Science and Economy of Population," "The Science and Economy of Money," of Commerce and of Manufactures, and the like. But this revision of boundaries after all brings us to nothing essentially different in purview from the ordinary treatise on political economy. The subject of investigation is the same in both cases, and nothing is gained by the change of names, unless it be the more complete exhibition of antagonism to the opposing school ; as if a Darwinian, for example, were to affect the use of the terms "species" and "genus" in some new sense. But we must remind our readers, if any valuable scientific discussion is to go on, scientific men must at least consent to use the same language.

And not only is the subject of investigation the same, but we are persuaded, let Professor Thompson object as he may, that the method is, after all, the same. In spite of all that is said as to the error of the English school in using the deductive method, and the claim of superiority for the method of induction, it will prove, upon examination, that deduction is the method into which all writers upon the subject fall of necessity. Mr. Carey, says Professor Thompson, "presents a body of economic teaching that rests on a few great and simple principles or conceptions, drawn by actual observation from life itself." This is a good statement of the method pursued by Mr. Carey, whom we have long regarded as one of the most thoroughly speculative writers who have ever dealt with the subject, and it is also a statement, in part, of the *a priori* method as discussed by Mr. Mill, in his "Essays on some Unsettled Questions." In each case the resort to experience is subsequent to the deduction,—Mr. Mill applying facts in order to test the soundness of his *a priori* reasoning, Mr. Carey searching among facts for the confirmation of conclusions which he fancies that he is obtaining from them by induction. And so Professor Thompson appears to us to reach his principles by reasoning from assumed *data*, and then to select and marshal his facts by way of proof. This is Mr. Mill's method, "with a difference," but it is in no sense induction.

A frank recognition of the real nature of the process, however, by enforcing more attention to the preliminary steps, especially of definition, might have saved our author from some serious mistakes. We will not dwell upon the eccentric definition of wealth in its scientific sense (p. 41), for Adam Smith's work is an example of the possibility of writing a treatise without defining the term at all.

Capital is defined with little precision (p. 129); the value of the definition is lost by the use of the term in a merely figurative sense, as on p. 143, where labor is called the capital of the laborer; and for want of some careful consideration of the essential nature and office of capital, the treatment of this whole side of the subject, including the relations of capital and labor, becomes loose, and, to our mind, inconclusive. Profits are even worse treated than capital, and the great law of the tendency of profits to equivalent rates in different occupations, which enters into almost every economic problem of importance, is scarcely recognized, either by admission or denial. An exact, or at least a fair statement of the doctrines of Malthus and Ricardo would also have improved the chapters on Population and Land, though it would have made the process of refutation more difficult. And so, too, with the theory of a natural rate of wages, which is travestied and then easily dealt with.

Some points in Professor Thompson's two chapters (VIII. and IX.) on Money and Finance invite a closer examination than we can give within the limits of this notice to other parts of the book. There are three kinds of money, we are told: (1) the precious metals, of which the "defects" are their weight and their intrinsic value [!]; (2) paper, which is free from these inconveniences, especially the latter, and, when known to be genuine and issued by a solvent firm, is freed from all objection; and (3) money of account, which is as much less material and more efficient than paper, as paper is less material and superior to gold, and seems after all to be nothing more or less than credit. But with this unusually ample, and we think faulty, extension of the term "money," we do not find that our author attains any superior clearness of principle. Thus he speaks of coin as one of our standards of payment, "a fixed one"; but elsewhere he says that to call the precious metals "the standard of value" is true only in a restricted sense, and fails to explain in what sense or with what restriction it is true. This failure is the more to be regretted, since the reason for rejecting the commonly accepted term is none of the clearest. "A standard must remain the same, however other things change; and this is certainly not true of gold and silver,"—which seems to us to show only that they are imperfect standards, although perhaps the best attainable, but not that they are not standards at all.

His own doctrine as to the value of money Professor Thompson intimates rather than states, but he succeeds in conveying an extraordinary misconception of the views of some writers whom he is interested in attacking. The English school, he tells us, hold that the value of money will decrease in exact proportion to the increase in its amount:—

"Mr. J. S. Mill applies the well-worn formula of demand and supply to the subject in this way: 'The demand for money consists of all the goods offered for sale. . . . The money and the goods are seeking each other for the purpose of being exchanged. . . . Hence if the whole money in circulation was doubled, prices would be doubled; if it was only increased one fourth, prices would rise one fourth.' Mr. Mill does not appear to be aware of the fact that all but a small percentage of purchases are paid for by offsets (checks, bills of exchange, etc.), without the use of coin." (p. 162.)

We are sorry to say that entire misstatement of Mill's theory of the value of money is not the worst charge to be brought against this passage. Our readers will find upon turning to the original,* that the lines cited by Professor Thompson are selected from paragraphs two or three pages apart; that the word "hence" is interpolated so as to present an argument which is not Mill's; and in short that the pretended citation is essentially of Pennsylvanian manufacture, and by no means creditable to the maker.

What then is really Mill's doctrine of money? Commenting on the language thus ascribed to him, Professor Thompson continues:—

"The element of truth in this mechanical theory is separated from the falsehood in Mr. Patterson's statement: 'An addition to the currency of a country is not necessarily a benefit. . . . If the currency be doubled, while the productions of that country and the demand for money remain as they were, the double amount will do no more than the lesser one,—only all prices, wages, rents, etc., will be doubled in amount.'" (p. 162.)

And how does this differ in principle from Mill's doctrine, not laid down in one passage alone, but dwelt upon and applied by him in scores of chapters, that, the amount of transactions remaining the same, the value of money will vary inversely with its quantity multiplied by its rapidity of circulation? It is tolerably clear, we think, that Mr. Mill does not hold the opinion which he is made to express by an ingenious manipulation of disconnected passages, and that the statement which is given as a correction of his supposed error is only a somewhat loose and vague paraphrase of his own doctrine.

In his discussion of banks and bank currency, Professor Thompson in several places shows that what are commonly called the deposits are an extremely efficient currency, created by the banks and generally ignored by legislators. But his method of dealing with this embarrassing subject in a panic does not clear it up so completely as might be wished.

"Those deposits were in great part created by credits granted, and were

* Mill's "Principles of Political Economy," Book III. ch. viii. § 2.

never intended to be paid in money of any sort. The banks should have the option of paying them in legal tender or in certificates of deposit, good at the clearing-house ; but they have none." (p. 174.)

We must remark that this option of paying deposits in legal tender or in certificates (certified checks), good at the clearing-house, was exercised by the banks on one memorable occasion, namely, in October, 1873, with little effect upon the public, except to cause intense disgust.

We doubt whether this question as to the relation of deposits to the currency can be studied anywhere so well as in the history of the Bank of England, and the space given to this history by our author does not appear to us excessive ; but we find in it some singular statements. Thus :—

" But in other than ordinary times, when this great credit-fund loses its currency, when the business community is demoralized by panic, and the demand for other and more tangible forms of money recurs, the Act [of 1844] becomes at once powerful for mischief. In such a case the actual supply of notes and specie is manifestly unequal to the vast demand made upon it by the business of a great nation ; and not only the Bank of England, but all the banks of the country are hand-tied so far as regards any help they can give. Their notes may be as good as gold. Since 1823 they have always been so. But they can issue none until the government step in and put an end to the panic by suspending the Act that was meant to prevent panics." (p. 178.)

And, what is peculiar, they issue few then. The issue of notes beyond the limit fixed by the Act was small in 1857, and was *nil* in 1866, showing plainly that "the supply of notes and specie" is *not* "manifestly unequal to the vast demand," but that the trouble is elsewhere. This fact needs to be kept in view, for it is constantly shuffled into the background by the inflationists ; and it should not be forgotten by Professor Thompson, who is not an inflationist, even if he is not what is commonly called a hard-money man. Indeed, we find it no easy thing to classify him in this respect. His chapters leave upon us the impression of certain sound beliefs struggling against the crushing influence of a vicious local opinion. Possibly Mr. Carey has been too much for him ; as, indeed, when we try to reconcile some of Mr. Carey's own doctrines on this subject, the venerable economist seems to have been too much for himself. Thus Professor Thompson is satisfied that "resumption is exceedingly desirable" ; that our paper "does fluctuate in value far more than gold" ; and that inflation is therefore to be deprecated but a passage on page 373 seems to intimate a doubt of any real

inflation of prices in 1870, while the author has a notion that the paper ought to be "elastic," and that the want of elasticity has been removed by the recent Act, which substitutes bank-notes for green-backs and puts an end to the limitation of their amount. Stability in the standard by which business is transacted, he thinks "absolutely necessary to the industrial health of the country"; but even if wrong were done in lowering the standard, "the *moral duty* of returning to the former standard is not so clear." Mr. McCulloch's plan of contraction, he is sure, might have made paper so scarce as to raise its value to that of gold, but could never have led to a return to the use of specie, "for the simple reason that no such volume of specie exists in the country," — it being our author's opinion, apparently, that a return to the use of specie by contraction requires a provision of specie equal in amount to the outstanding paper. When and how, then, is this desirable resumption to be effected?

"We will be able to resume specie payments when we cease to rank among the debtor nations, when our national debt is owed to our own people, and when our industry is adequate to the supply of the nation's need of manufactured goods." (p. 206.)

The political economy of this passage, not to say its rhetoric, would almost seem to have come from a President's message. It defers far beyond the year 1879, we fear, the return to the specie standard, for it is only when we shall have accumulated capital enough to be our own sole creditors, and when successive years of protection and many new turns of the screw shall have excluded foreign manufactures, that we may hope to return to that state of things which Professor Thompson thinks is happy, and yet not so very happy in comparison.

This reminds us, that in writing his book Professor Thompson had a twofold purpose, of which he says the second branch is to supply a text-book for teachers "who approve of our national policy as in the main the right one," — the "national policy" being, of course, the protective system. To this end everything is made to contribute, and every discussion is carried on with a side-glance at the beneficent effects of a high tariff. And bearing in mind the author's avowed object, we are disposed to regard his effort as successful. That is, he has made a compendium of the arguments for protection, whether economical or historical, whether resting upon reason or upon prejudice, — indeed, we are tempted to say, whether good or bad, seeing that that ancient bugbear, the "balance of trade," appears to receive from him a toleration which we can hardly believe to be hearty. One or two bits of historical review we must present to our

readers, as samples of the *post hoc propter hoc* treatment not uncommon with the "inductive" school :—

"His [Turgot's] successors in 1786 negotiated a treaty with England, by which France was flooded with English goods, and in two years the manufacturing industries of France were almost annihilated. Distress became so universal that the government was forced to call the States-General, and the Revolution — whose first and loudest cry was, 'Give us bread!' — began." (p. 283.)

This new explanation of the French Revolution may be compared with the author's account of the speculation and bank explosions of 1837 and the years following, which it appears were the result of Mr. Clay's compromise tariff :—

"Till 1842 the process of reduction [of duties] went on, and the gradual closing of American factories and workshops went with it. The capital of the country, the accumulations of years of protected and prosperous industry, being driven from manufactures, sought a channel for investment in other quarters. The sale of public lands rose in 1836 to \$ 24,877,179, or more than ten times what had been the average rate. There was an enormous expansion of the currency and inflation of prices. Imports increased seventy-five per cent. Speculation ran riot; wild-cat banks grew up as fast as mushrooms. . . . Then in 1837 came the crash, the banks suspended specie payments, and the country wakened up from a feverish dream to find itself on the point of bankruptcy." (p. 365.)

The crisis of October, 1857, seems in like manner to have been caused by the tariff act of the previous March :—

"A Congress controlled by this interest reduced the duties twenty-five per cent in 1857. This was not a sudden change of policy, but the crowning of the edifice that had been building for eleven years past. It at once intensified all the unwholesome tendencies in our commercial and industrial life; turned capital once more from production to speculation, and led to a large and varying increase of importations. Another great panic followed through the collapse of unsound enterprises, and carried with it many that were sound." (p. 369.)

With a good deal of "history" of this sort we have a full collection of arguments, the recital of which is likely to be convenient both to friends and opponents of protection, though, it is no disparagement to the author to say, few of them are novel. We are glad to see, however, that he does not shirk the doctrine as to the wide extension of the duties of the state, on which protectionism rests. Frederick the Great and Napoleon appear to be his models in the art of government. "The state" is in fact in his theory to assume the responsibility for everything, as indeed why should it not, seeing that it is of

divine origin (p. 35), has a distinct moral personality, and is divinely charged with the duty of guiding the material development of the people ; and if the material, then, we must ask, why not the spiritual as well ? It would seem that the wisdom of the state, too, must be something quite distinct from that of the particular Boutwells, Richardsons, Delanos, or Mortons who are its chief instruments at any given time. Thus the state should maintain a national clearing-house for all the banks, having the power to expand (similar, we suppose, to that exercised by the treasury in 1873) in case of stringency ; it should prevent the banks from "protecting themselves" in case of panic ; it should exercise a general oversight over rural economy ; should direct the industry of its citizens into the channels which it judges best ; and in short should decide for them what they shall do and how and when. Indeed, Professor Thompson's cure for every evil would seem to be a reference to the state, which must therefore of course have omniscience, entirely contrary to what might be expected from the smallness of the vessels in which its wisdom is generally supposed to be contained. If it is objected, as it reasonably may be, that all this has a strong leaning towards communism, the answer is as follows :—

"That the protectionist principle bears some resemblance to the false positions of the communists, or can be made to do so in clever but hostile statements, we do not care to deny. It contains the truth of which communism is the counterfeit falsehood,—the truth that it is the duty of the state to 'promote the general welfare.' It thus furnishes the best refutation of communism, for error is never defeated and put to rest by bare contradictions, but by statement of the truth that lies nearest to them, or even involved in them, and that give them what vitality they have. If the assertion of the duty leads on to communism there is unhappily no escape for the American nation ; the country stands already committed to it by the preamble to the United States Constitution." (p. 276.)

If this is the best that can be said in defence against the charge, the communists may look for an alliance with the Pennsylvania school as soon as it is shown that "elastic" currency and high duties leave the working masses in worse condition than at the start.

We have spoken of the twofold purpose of Professor Thompson's book. The branch to which we have not yet referred is thus described by him in the Preface :—

"To furnish a readable discussion of the subject for the use of those who wish to get some knowledge of it, but have neither the time nor the inclination to study elaborate or voluminous works."

We suppose there is no doubt that these lines mean that Professor

Thompson offers his book as a readable translation of Mr. Carey's "Principles of Social Science." Of the need of such a translation there is no question. Mr. Carey's system is an important element — we had almost said, phenomenon — in the economical discussions of the day. Unfortunately it must be said of him, as Sydney Smith said of Bentham, "Neither gods, men, nor booksellers can doubt the necessity of a middle-man between him and the public. He is long ; he is occasionally involved and obscure ; he invents new and alarming expressions." We believe, therefore, that the present work will be welcomed by many who wish to learn, without too many days and nights of toil, what there is in Mr. Carey's system. But we apprehend that as they study the subject the question will begin to loom before them in larger and larger proportions, whether the difficulty is not one which is beyond help from any translator, — in short, whether, after all, there is any system there.

11. — *History of New England.* By JOHN GORHAM PALFREY. Vol. IV. Boston : Little, Brown, and Company. 1875.

DR. PALFREY introduces his fourth volume by an intimation that illness and age have shaken his powers so that he must expect to fall short of his ideal, and must be content to produce what may not bear a rigorous criticism. The rigorous critic, with his attention sharpened by this warning, may perhaps succeed in detecting the signs of age and failing powers which have escaped our notice, but on a first reading we must confess to having failed in discovering any reason for placing this volume below its predecessors. Whether further study will alter this impression remains to be seen ; but as yet the qualities which in our opinion have hitherto placed Dr. Palfrey absolutely first in the ranks of American historians, the strong good-sense, the thorough study, the sober and finished style, the contempt for sentimentalism and affectation either of thought or manner, the lurking humor, and, above all, the thoroughly healthy and manly insight into the morals of his subject, seem as evident in this volume as in any that have gone before. Nothing is more striking in the early society which he has described, than the individuality of character which in comparison with our own time seems to stamp each actor on the scene with a sharpness of outline as different from modern vagueness as a portrait of Holbein from a chromo-lithograph. In this era of diluted morality and popular history, Dr. Palfrey's great work has

caught something of that strong quality of mind and thought which was so characteristic of the Puritan age.

The period covered by this volume, between 1689 and 1740, furnishes little either in Europe or America that can elevate or inspire the historian. The world, weary of convulsions and religious enthusiasm, was glad to rest. The Church fell into contempt. Political development ceased. Gross immorality or cynical indifference, such as were without a parallel in modern times, succeeded the long sway of religion. From this corruption France and Germany could only recover by a convulsion that destroyed the continuity of their history, and the reader of English annals is actually at a loss to understand what preserved the English Constitution and the English Church from the same fate. Chatham did indeed save the one and Whitfield the other, but the danger for a time was extreme.

During these fifty years of reaction, corruption, and indifferentism, the Puritan colonies of New England were an anachronism in the world. Virginia or Pennsylvania could flourish in such an atmosphere, but New England slowly perished. The descendants of Winthrop, Endicott, and Dudley found themselves in a new order of things. Their fathers' great experiment of a religious commonwealth had broken down. The past had to be abandoned. To shape a new future was a work of time, and the leaders were no longer men of heroic stature. It is sad to watch how literature gradually declines, how men's acts and motives become petty, how their religion grows hard and formal, their temper becomes sour, their very persons seem to grow thin and sharp, during this period of arrested development. It is this half-century of small things and small men with which Dr. Palfrey's fourth volume is filled, and naturally such a subject can hardly be enlivening. Beginning with the sombre picture of the witchcraft delusion, the author's style rises for a moment, as it is apt to do in dealing with these deeply marked characteristics of New England, into an elevation that is not far from pathos:—

“If any may be specially excused for being led astray by gloomy superstitions, it is they who are surrounded by circumstances, and pressed by griefs and anxieties, such as incline to sad and unhealthy meditation. The experience of the three heroic generations of English exiles in Massachusetts had been hard and sorrowful. Of those who were living when the provincial charter came into effect, the memory of the oldest went back to the primitive times of want and misery; the middle-aged men had been out in arms in the most dreadful of the Indian wars, and the middle-aged women had passed years of mourning for the husbands, lovers, and brothers whom it had swept away. The generation just entered upon the stage had been born and reared in melancholy homes. The present was full of troubles and fore-

bodings. The venerated charter had been lost. Social ties had been weakened. Social order was insecure. The paths of enterprise were obstructed. Industry had little impulse. Poverty was already felt. There was danger of destitution. A powerful foreign enemy threatened, and the capacity for defence was crippled by penury. A people in the mood to which such surroundings naturally lead could scarcely be expected to set the example of a release from gloomy visions which bewildered the rest of mankind. Nor would it be fanciful to ascribe some influence on the spirits and the imagination to the austere environments of the settlers, and the harsh aspects of the scenery amid which their temper had been educated and their daily life was passed. An ocean divided them from the old seats of civilized life. Almost in the primitive nakedness of existence they were waging a contest with the awful elements. Their little settlements were isolated and unjoyous. The scene all around,—river, rock, covert, mountain, forest,—almost as wild and sombre as creation left it, invited to stern and melancholy musing."

The administrations of Phips and Bellomont (1692–1701) were marked by no strong indications of renewed longings for independence. Massachusetts was cautious and new to the situation, nor were either of these governors men to alarm her pride. But with the return of her hated child, Dudley, to power, in 1702, began that sullen and dogged resistance, varied on either side by outbursts of ill-temper, but always restrained within the limits of constitutional action, which slowly led on to the popular explosion of 1765. Under Dudley's successor, Shute (1716–1727), the Legislature no longer contented itself with resistance, but began a systematic and persistent policy of encroachment upon the royal prerogative, and seemed disposed to exclude the royal governors from all share in the internal control of the colony. Burnet was then sent to bring them to order after they had worried Shute out of the country, but the unfortunate Burnet fell a victim to his persecutors, and died without gaining a single step. Belcher, who succeeded Burnet in 1730, was, like Dudley, a native New-Englander, and knew how to manage his countrymen better than the Shutes and Burnets of an English court could ever have done. By yielding what had to be conceded, and persisting as doggedly as the Legislature in what was feasible, Belcher won the honors of a drawn battle. Dr. Palfrey's account of this long constitutional struggle is apparently candid, and as interesting as so petty a quarrel can easily be made. During the first half of the period he has the advantage of a certain degree of personal interest lingering about the sharply defined figures of a few remnants of the Puritan age. Stoughton, Dudley, and the Mathers are characters that can still be recalled to life. Dr. Palfrey's summing up of Stoughton's career is an excellent example of his style:—

"He had filled many offices, and performed their duties with a surly assiduity, which commanded a certain sort of esteem. He perhaps loved nobody, though the winning as well as commanding powers of Dudley may have blended something of affection with the deference into which he was subdued by the genius of that highly endowed man. On the other hand, if he was not loved, Stoughton was not of a temper to be made uncomfortable by isolation, while it was a pleasure to him to feel that he had some command of that confidence which men repose in such as they see to be indifferent to their good-will, and independent of it as coveting nothing which it has to bestow. . . . The prosecution of the witches was a proceeding quite to his mind; the "stern joy" of inflicting great misery under the coercion of an unflinching sense of duty was strangely congenial with his proud and narrow nature; he had a morbid relish for that class of duties which, bringing wretchedness on others, may be supposed to cost the doer a struggle against the pleadings of pity. When, sympathizing with the almost universal sorrow and remorse that succeeded the witchcraft madness, his gentle associate Sewall publicly bemoaned his sin, and in agony implored the divine forgiveness, Stoughton professed that, whatever mistakes might have been made, he saw 'no reason to repent of what he had done with the fear of God before his eyes.' . . . If the people did not want him, he could be content; at all events, he would not complain or solicit. If they did want him, he would serve them without fraud and without ambition, but it must be after his own grim fashion. . . . He meant to be excellently firm; he excelled in being churlish, morose, and obstinate, in a style of the most unimpeachable dignity."

Towards Dudley, on the other hand, Dr. Palfrey measures out a sterner judgment:—

"It is needless to multiply words on the character of Dudley. It was not a mystery, nor was he a monster of turpitude. There is no necessity to regard him as having been destitute of all moral sense, nor even to set down his religious professions as merely hypocritical and false. . . . For aught man can know, this man, like many others more famous and many less famous than he, had tampered with his better mind till the distinctions which make the world's security were obscured to his own view; and with a certain sort of sincerity he could call evil good and good evil as often as only evil would suit his domineering aim. At all events, he had no purpose to be true and useful. He meant to get power, and all that power brings with it, and with gay arrogance placed his unimportant self above the rights and the welfare of the community, which, with honest affection, had empowered him to do it grievous harm. . . . From his early awakening to the consciousness of uncommon powers, he seems to have considered with a confident disdain what an unwise part his father had chosen when he undertook to be a witness and a sufferer for liberty and right. Though he never knew his father, who died in his early childhood, he had heard from his nursery-days of the hardships which Christian heroism had brought on that lofty-minded, if narrow-minded, man; and in his own bosom he found nothing that promised compensation for the sacrifices of such a career. . . . When his power

to wrong and distress the native country which had confided and taken pride in him had been well ascertained, he had no reluctance to this more lucrative service ; for the lust of gain had silenced all misgivings, and by constitution he had sufficient courage to be not only without scruples but without shame. Thomas Hutchinson, two generations later, was so like him as to be quite unconscious of the condemnation which he was pronouncing when he said of Dudley, that ‘he had as many virtues as can consist with so great a thirst for honor and power.’”

If anything could make us quarrel with Dr. Palfrey, it would be that he has omitted to give an equally careful estimate of the Mathers. These personages have hardly yielded to the History all the enlivenment or instruction which they could have been made to supply, and, in a dreary waste like this, the humor which the Mathers can furnish should be utilized to the utmost. With Cotton Mather the old clerical influence ran out in absurdities, and henceforward the new class of lawyers were to give another aspect to society. But in the interval the wilderness is miserably barren. Dudley, Stoughton, Phips, the Mathers, and the royal governors aside, Dr. Palfrey’s fourth volume has almost no personal interest to offer. The Legislature had leaders, and we know their names, but no more. In 1728, Governor Burnet made a sharp and effective attack on the Legislature, as follows :—

“I may appeal to the consciences of such gentlemen as have been concerned in the public affairs here, whether the allowance for the governor’s salary has not been kept back till other bills of moment have been consented to, and whether it has not sometimes depended on the obtaining such consent. These matters, which are well known, leave no room to wonder why his Majesty thinks this method of supporting the governors a design to make them dependent on the people. And as you have given me no reason at all against this opinion, I must believe it is the real view intended to be pursued.”

To this direct thrust the House riposted thus :—

“If we resemble the British Constitution, as your Excellency has done us the honor to declare, we humbly apprehend that no part of the Legislature should be independent. We have ever conceived that it was the peculiar distinction and glory of the British Constitution, that every part of it had a mutual relation to and dependence on each other. . . . If your Excellency intends that we do not put so much confidence in the governor as the Parliament do in our most gracious sovereign, to whom the civil list is granted for his life, (which God long preserve !) we freely acknowledge it. Is it reasonable or possible that we should confide in any governor whatsoever so much as in our most gracious king, the common father of all his subjects, who is known to delight in nothing so much as their happiness, and whose

interest and glory, and that of his royal progeny, are inseparable from the prosperity and welfare of his people, whereas it is most obvious that neither the prosperity nor adversity of a people affect a governor's interest at all when he has once left them? As to the past conduct of Assemblies in making the support of the government conditional, it is not easy to say what men may have had or had not in their own views and thoughts; but this we can say, that to have done so, as the case might have been circumstanced, would not have been unreasonable in itself nor without precedent from the Parliaments of England, when some of the greatest patriots and most wise and learned statesmen have been actors in them. . . . We are constrained, in faithfulness to the people of this Province, to say that we cannot pass any Act to establish a fixed salary for the governor, according to your Excellency's instructions from his Majesty."

This paper, admirably compounded of audacity and skill, can be the work of no ordinary man. Yet of such documents we learn only what Hutchinson can tell us, that they were "supposed to have been drawn by Mr. Cooke, . . . and in the latter part of the controversy they were generally drawn by Mr. Wells." What manner of men were these? What was their conversation, their reading, their mode of life? We know as little of them as though they had flourished in the Middle Ages. "The greatest part of them [the House of Representatives]," writes Shute, "are of small fortunes and mean education." There are, indeed, few more curious spectacles in the history of constitutional government than this, of the people of Massachusetts, with no authoritative leader, with neither wealth nor social position, with very defective education, and with no clearly defined fundamental principle of government which they dared avow, carrying on a long, arduous, and successful constitutional struggle against the influence of the crown, and establishing precedents of which no one else in the whole world then understood the value. But the peculiarity of the phenomenon itself renders the subject the more difficult to enliven. These village Hampdens who came up to Boston year after year and voted solidly to disobey the royal orders, were the offspring of town-meetings and the Puritan church-system. They have left no record of their own personality. They can only be dealt with in mass, as a tendency, a force, which belonged to the soil and the atmosphere. Dr. Palfrey is loyal to them in the best sense. He confesses that, "at first view," the jealousy entertained by Massachusetts of her royal governors seems captious. This is certainly a kindly view of the subject. Most readers would readily enough agree that the manifestations of that jealousy not only seemed, but often were captious, and calculated to do more harm than good. The pettiness of the points which the Legislature sometimes chose to dispute,

does not indicate leadership of the first class. The contemptuous or indolent good-nature of the home government in its treatment of the stiff and crabbed Puritan colony might, if it had not at last been abandoned for force, be now a monument of British wisdom. As it turned out, the wisdom is on the side of the colonists, and Dr. Palfrey's summing up is convincing :—

"Extreme as may appear some of the measures of the patriot legislators of Massachusetts in their opposition to the royal governors, it is striking to observe how they were justified by later events. To the end that executive and judicial officers may do their duty without fear or favor, undoubtedly it is true that they ought not to be dependent for their living on grants made by a legislature from time to time. . . . But, most unfortunately, the constitution of government under the provincial charter of Massachusetts was such that the people could not make their governor and judges independent of themselves without throwing them into the adverse interest and making them the partial and powerful dependants of the crown. . . . But as soon as, by the overthrow of foreign authority, it became possible to place the administrators of the chief executive and the chief judicial powers in a position of absolute independence, the importance of that arrangement as a condition of good government was cordially recognized in the constitution of the free commonwealth of Massachusetts which imposed the unalterable law that the salaries of her governors and of the judges of her Court of Final Appeal should not be liable to reduction during their term of service."

In one respect this volume might perhaps have been made more complete. Dr. Palfrey has hardly thrown so much weight on the financial history of the period as its importance demands. The Province was not only harassed by wars which forced it during the whole of this half-century to the emission of large sums of depreciating paper; it was also a victim to every species of popular financing. The delusions of English bubble-companies had their little counter-types in Boston. The patriots fell into the grave mistake of adopting as a part of their patriotic system the establishment of a land-bank and other financial experiments, the manifest dishonesty of which is only excusable on the ground of inexperience. All the most radical financial theories of 1875 were put in full practice a century and a half ago, in New England. The nature of these experiments, their effects upon the industry, and more especially upon the morals of the Province, their relation to the politics of the patriots, are points in our colonial history that have never yet been thoroughly investigated. Even the materials for such a sketch have not yet been collected, though they probably exist in abundant quantity in the confused archives of the State House. The financial policy of the General Court and the popular party came into sharp collision with that of

the home government. The interference of Parliament hastened the collapse. Litigation and ruin were spread wide through the community, and the bitterness engendered by the suppression of the patriots' hair-brained financial schemes was not without a direct influence in keeping alive that hatred of the Crown and Parliament which subsequently burst out with such fury in the political career of Samuel Adams and his friends. If only in its general relations to the development of New England society, and as an indication of the change in men's morals and interests, this subject deserves a special study and a prominent place.

The reader breathes more freely at last as he finds this long half-century of cold religion, disjointed and bickering government, blundering and desolating wars, wild and ruinous finance, stagnating intellectual life, and stationary or declining economical interests, behind him. The period was sad and monotonous. Its history can hardly be otherwise than sad and monotonous also. Dr. Palfrey's next and concluding volume will at least be illumined by some gleams of triumph and sunshine. Even in our own day the story of Louisburg and Quebec makes the blood of a New England man run faster, and, at the moment, Massachusetts must have felt a joy that had never been her share since the fall of Andros. Shirley was a far more attractive character than any of his predecessors, while the statesmanship of the elder Pitt is still a subject for honest enthusiasm. A sketch of the social and intellectual condition of New England at the close of the French wars, marking the alterations which time had brought about, and the extent to which Puritanism had been modified by circumstances, would be of no small interest and of permanent value. New England shows no sign of producing any new historian so competent to this task as Dr. Palfrey; she can never produce one who stands by training and experience in such close sympathy with his subject. His work is an honor to our time, and that he may complete it as it was begun must be a most earnest hope and wish among all literary New-Englanders.

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